TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

No. 201.

OLIVER S. GARRETSON, APPELLANT,

vs.

CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, AND HENRY R. CLARK.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF NEW YORK.

FILED NOVEMBER 13, 1880.

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INDEX.

	Original	Print.
Title, &c	1	1
Bill of complaint	5	2
Substitution of Jay Hyatt as complainant's solicitor	12	5
Amendments to bill of complaint	13	5
Answer	14	6
Replication	25	12
Interlocutory decree	26	13
Master's report	29	14
Substitution of James A. Allen, complainant's solicitor	31	15
Complainant's exceptions to master's report	32	15
Final decree	37	18
Enrollment of decree	44	20
COMPLAINANT'S PROOFS.		
Complainant's Exhibits Nos. 1, 2, 3, 4, 5, 6, 7, 7½, and 8 introduced	45	20
Testimony of Oliver S. Garretson (direct)	47	21
Oliver S. Garretson (cross)	55	26
Joel G. Garretson (direct)	56	27
Joel G. Garretson (cross)	58	27
Cyrus L. Garretson (direct)	59	28
Cyrus L. Garretson (cross)	60	29
Certificate of examiner	61	30
Complainant's Exhibit No. 1. (Clark and Garretson patent, No. 54830)	64	30
No. 2. (Assignment from Shepard to Garretson)	69	33
No. 3. (Garretson patent, No. 67643)	70	34

DEFENDANTS' PROOFS.

	Original.	Print.
Defendants' exhibits introduced	75	36
Testimony of Charles B. Clark (direct)	77	37
(cross)	82	41
(redirect)	86	45
Faber du Faur (direct)	86	45
John Boyd Eliot	96	53
Certificate of examiner, Stillwell	102	58
Testimony of Rufus F. Osgood	103	58
James Sangster (direct)	107	62
James Sangster (cross)	107	62
Albert Storer (direct)	107	62
Albert Storer (cross)	109	64
Charles B. Clark (redirect)	112	67
Charles B. Clark (recross)	113	68
Defendants' Exhibit Merrick's Patent	118	72
Briggs Patent	124	74
Park Patent	130	77
Boardman Patent	136	80
Gray & Adams, File-Wrapper	143	83
Randlett Patent	150	86
Homes Patent	156	88
Karr Patent	163	90
Mason and Messenger Patent	170	93
Clark & Ferguson Patent	176	95
Taylor Reissue Patent	180	97
Clark Patents	186	99
Clark Patents	189	101
Rickarts Patent (English)	192	102
Prechtle 1, drawing	199	104

COMPLAINANT'S PROOFS ON ACCOUNTING.

Testimony of John K. Clark	201	101
Oliver S. Garretson (direct)	205	107
(cross)	222	117
(redirect)	243	129
(recross)	249	132
Henry H. Mason (direct)	251	133
(cross)	259	138
(redirect)	273	146
(recross)	276	148
(redirect)	276	148

DEFENDANT'S PROOFS ON ACCOUNTING.

Testimony of John K. Clark (redirect)	277	148
(cross)	283	152
(redirect)	304	164
Edwin L. Ferguson (direct)	306	165
Edwin L. Ferguson (cross)	307	166
Henry R. Clark (direct)	308	166
Henry R. Clark (cross)	309	167

EXHIBITS.

	Original.	Print.
Complainant's Exhibit No. 1. (List of complainant's prior customers) ..	312	169
No. 2. (Complainant's estimate of cost)	315	171
No. 3. (Complainant's estimate of cost)	317	172
No. 4. (Complainant's estimate of damage)	319	173
No. 5. (Computation from Exhibit A)	320	174
Defendants' Exhibit B. (Agreement)	321	175
E. (Defendants' estimate of profits)	324	177
F. (Same on three-part mop)	326	178
G. (List of defendants' prior customers)	326	178
Complainant's Exhibit No. 10. (Taylor extension)	330	180
Defendants' Exhibit K. (Clark Patent, No. 166342)	340	184
Opinion of Woodruff J., (on final hearing	348	186
master	350	186
Blatchford J., (on exceptions to master's report	355	189
Petition for reargument of exceptions	375	194
Order denying petition for reargument	389	201
Opinion of Blatchford J., on motion for reargument	391	202
Appeal	399	204
Bond on appeal	410	208
Citation	414	210
Clerk's certificate	417	210

1 United States circuit court, northern district of New York.

OLIVER S. GARRETSON
versus
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK. } In equity.

The complainant in the above-entitled cause filed his bill of complaint, which is hereto annexed, on the third day of May, 1874, against the defendants herein a subpœna to appear and answer in said cause was thereupon issued, and was served previously to the return day thereof upon the said defendants.

The defendants duly appeared herein on May 22, 1874, by Lewis and Gurney, as their solicitors.

The complainant filed amendments to his said bill of complaint on May 25, 1874, which amendments are hereto annexed.

By stipulation, F. A. Macomber was, on September 14, 1874, sub-
2 stituted as solicitor for said defendants, in place and stead of Lewis and Gurney.

The defendants filed their answer to the said bill of complaint on the 30th day of September, 1874, which answer is hereto annexed.

The complainant filed his replication to said answer on the 5th day of October, 1874, which replication is hereto annexed.

Afterwards proofs were taken in said cause on the part of complainant and defendants and were duly filed, and the said cause was brought to a hearing and was argued by the respective counsel at an adjourned term of this court, held in the city of Albany, on the 19th day of January, A. D. 1875, before the honorable Lewis B. Woodruff, circuit judge.

Afterwards a decision was made and filed on April 30, 1875, and a decree in favor of the complainant in the above-entitled cause, for an injunction and account, was, on May 11, 1875, made and entered, which decree is hereto annexed.

3 Afterwards, and on May 17, 1876, George J. Sicard, the master pro hac vice, appointed by said decree, filed his report on said accounting in the above entitled cause, which report is hereto annexed.

Afterwards, and on May 20, 1876, James A. Allen, of Buffalo, was substituted as solicitor for the complainant in place and stead of Jay Hyatt, deceased.

Afterwards, and on June 7, 1876, the complainant in above-entitled cause filed his exceptions to the report of said master, which exceptions are hereto annexed.

Afterwards, and on June 18, 1878, the said cause was brought to a hearing and argued by counsel upon the exceptions to the said master's report and a decision was afterwards, and on July 15, 1878, filed, sustaining the report of said master, and overruling complainant's exceptions thereto.

Afterwards, and on March 16, 1880, the said court at an adjourned
4 term thereof, held in the city of Utica—present, the honorable Samuel Blatchford—made its final decree in said cause, which decree was duly filed and entered, and is hereto annexed.

5 Circuit court of the United States for the northern district of New York, in the second circuit.

OLIVER S. GARRETSON
against
CHAS. B. CLARK, JOHN K. CLARK, EDWIN L. Ferguson, and Henry R. Clark. } In equity.

To the judges of the circuit court of the United States for the northern district of New York, in the second circuit.

Oliver S. Garretson, a citizen of the State of New York, brings this his bill of complaint against Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, citizens of said State of New York, and doing business under the firm name and style of Clark & Company, at the city of Buffalo, in said State, and within the northern district of New York.

And thereupon your orator complains and says that heretofore and before the 22d day of May, 1866, Chas. B. Clark and your orator being the joint original and first inventors of a certain new and useful improved mop-head, which had not been known or used by others before the invention or discovery thereof by the said Charles B. Clark and your
6 orator, did make application in due form of law to the Commissioner of Patents of the United States for letters patent therefor, and having fully and in all respects complied with all the requirements of the law in that behalf, thereupon, and after due proceedings had, the said Commissioner caused letters patent to be made out in the name of the United States of America in due form of law, and bearing date the 22d day of May, A. D. 1866, and numbered 54860, whereby there was granted and secured unto the said Chas. B. Clark and your orator, their heirs or administrators, or assigns, for the term of seventeen years from the date thereof, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improved mop-head; and the said letters patent having been duly signed and countersigned by the proper officers of the United States, and sealed with the seal of the Patent Office, and the same having been duly recorded, were issued and delivered to said Clark and your orator; all of which will more fully appear in and by said letters patent, or a duly certified copy thereof, ready in court to be produced.

And your orator further shows unto your honors that on or about the 17th day of February, 1869, the said Chas. B. Clark, by an assignment in writing, sold and transferred unto John D. Shepard all of his right, title, and interest in and to said letters patent, which assignment was duly recorded in the Patent Office of the United States, as by said assignment, or a duly authenticated copy thereof, and the certificate of such recording thereto affixed ready in court to be produced, will fully and at large appear.

And your orator further shows unto your honors that on or before the 11th day of November, 1871, the said John D. Shepard, by an assignment in writing duly sold, transferred, and set over unto your orator all of his right, title, and interest in and to said letters patent and invention, which assignment was duly recorded in the Patent Office of the United
7 States, as by said assignment, or a duly authenticated copy thereof, and

the certificate of such recording thereto affixed ready in court to be produced, will fully and at large appear.

And your orator further shows unto your honors that he is in the full possession, exercise, and enjoyment of the rights and interests acquired by him as aforesaid, and that the rights of your orator in and to said letters patent have been generally respected and acquiesced in by the public.

And your orator further shows unto your honors that he verily believes, and therefore charges the fact to be, that the said Charles B. Clark and your orator were the joint original and first inventors of the improved mop-head, patented by them as aforesaid and described and claimed in the said letters patent, and that the same was not known or used by any other person before the invention and discovery thereof by said Clark and your orator, and that the said invention is of great value and utility.

And your orator further shows unto your honors that heretofore and before the 13th day of August, 1867, your orator, being the original and first inventor of a new and useful improved mop-head, which had not been known or used by others before the invention or discovery thereof by your orator, did make application in due form of law to the Commissioner of Patents of the United States for letters patent therefor, and having fully and in all respects complied with all the requirements of law in that behalf, thereupon, and after due proceedings had, the said Commissioner caused letters patent to be made out in the name of the United States of America in due form of law, and bearing date the 13th day of August, 1867, and numbered 67643, whereby there was granted and secured unto your orator, his heirs, administrators, and assigns, for the term of seventeen years from the date thereof, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improved mop-head; and the said letters patent
8 having been duly signed and countersigned by the proper officers of the United States, and sealed with the seal of the Patent Office, and the same having been duly recorded, were issued and delivered to your orator; all of which will more fully appear in and by said letters patent, or a duly certified copy thereof, ready in court to be produced.

And your orator further shows unto your honors that the full right and entire title in and to said last-mentioned letters patent are vested in your orator, and that he is in the full possession and enjoyment of the rights and interests acquired by him as aforesaid, and that the rights of your orator in and to said letters patent have been generally respected and acquiesced in by the public.

And your orator further shows unto your honors that he verily believes, and therefore charges the fact to be, that your orator was the original and first inventor and discoverer of the improved mop-head patented by him as aforesaid, and described and claimed in the said last-mentioned letters patent as aforesaid, and that the same was not known or used by any other persons before the invention and discovery thereof by your orator, and that the said invention is of great value and utility.

And your orator further shows unto your honors that the defendants herein have been and now are manufacturing, selling, and using machines or apparatus constructed in accordance with and containing the inventions described in and secured by said several letters patent, and your orator has reason to believe that they will continue to manufacture and sell the same, and are thereby causing your orator great and irreparable damage,

and refuse to pay your orator any of the profits which they have made and received by reason of such unlawful manufacture and sale of the said patented invention, or to desist from manufacturing and selling the same; all of which is in violation and infringement of said two letters patent, and of your orator's exclusive rights under the same, and against his consent and allowance.

9 Which actings and doings of the defendant are contrary to equity and good conscience, and tend to manifest injury of your orator in the premises.

In consideration whereof and forasmuch as your orator can only have adequate relief in this honorable court, where matters and things of this sort are made cognizable by statute. To the end, therefore, that the said defendants may, if they can, show why your orator should not have the relief hereby prayed, and may upon their corporal oath, and according to their best and utmost knowledge, remembrance, information, and belief, full, true, direct, and perfect answer make, to the matters and things hereinbefore stated and charged.

And that the said defendants may answer the premises, and that they may be decreed to account with and pay over to your orator the profits which they have realized from such unlawful manufacture, sale, and use of the said patented invention, and all such gains and profits as your orator would have received but for the said unlawful acts and doings of the said defendants, and all such damages as your orator has sustained by reason of said unlawful acts and doings.

And may it please your honors, the premises considered, to grant unto your orator the writ of injunction issuing out of and under the seal of this honorable court, or issued by one of your honors, according to the form of the statute in such case made and provided, perpetually enjoining and restraining the said defendants, their clerks, attorneys, agents, servants, and workmen, from directly or indirectly making, using, or selling to others, any of the machines, or containing or embodying the invention described and claimed in said two letters patent, Nos. 54860 and 67643; and that your orator may have such other and further relief as the nature of the case may require and to this honorable court shall seem meet.

And may it please your honors to grant to your orator a provisional or preliminary injunction issuing out of and under the seal of this honorable court, enjoining and restraining the defendants, their attorneys, agents, clerks, servants, and workmen, to the same purport, tenor and

10 effect hereinbefore prayed for in regard to said perpetual injunction.

And may it please your honors to grant unto your orator a writ of subpœna of the United States of America, issuing out of and under the seal of this honorable court, directed to the said Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, defendants, commanding them, on a day certain therein to be named, and under a certain penalty, to be and appear in this honorable court, then and there to answer all and singular the premises, and to stand to, perform, and abide such further order, direction, and decree as may be made against them.

And your orator, as in duty bound, will ever pray, etc.

OLIVER S. GARRETSON.

SPRAGUE & HYATT,
Solicitors, and of Counsel for Complainant, Buffalo, N. Y.

UNITED STATES OF AMERICA,
Northern District of New York, ss:

OLIVER S. GARRETSON, being duly sworn, deposes and says that he is the complainant in the foregoing bill named, and has read the same, and knows the contents thereof. That the said bill is true of his own knowledge, except as to those matters which are therein stated to be on his information and belief, and as to those he believes to be true.

That this deponent verily believes the said Charles B. Clark and deponent to have been the first and original inventors of the improvement claimed in said letters patent No. 54860, and that the same had not been in use or described before the invention and discovery thereof by said Clark and deponent; and deponent verily believes himself to have been the first and original inventor of the improvement claimed in said letters patent No. 67643, and that the same had not been in use or described before the invention thereof by deponent.

11

OLIVER S. GARRETSON.

Sworn to and subscribed before me this 7th day of May, 1874.
[L. S.] F. L. FINKENSTAEDT,
Notary Public, Erie County, N. Y.

(Endorsed:) Bill. Filed May 3, 1874.

12 Circuit court of the United States. In equity.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK ET AL.

We hereby consent that Jay Hyatt be substituted in our place as solicitor for complainant in the above-entitled suit, and that a rule to that effect may be entered on filing hereof.

Buffalo, May 18, 1874.

SPRAGUE & HYATT,
Sol'rs for Compl't.

To the clerk of the court:

Please enter an order in accordance with the above & send copy.
Yours, &c.,

JAY HYATT.

(Endorsed:) Consent for substitution of sol'r for compl't. Filed May 19, 1874.

13 United States circuit court, northern district of New York. In equity.

OLIVER S. GARRETSON
vs.
CHAS. B. CLARK, JOHN K. CLARK, EDWIN L. Ferguson, Henry R. Clark.

And now, to wit, this 22d day of May, 1874, the bill of complaint in the

above-entitled suit is amended by inserting at the end of the fifth paragraph of the fifth page, between the 28th and 29th lines of said page, the following:

And full, true, direct, and perfect answer make to such of the several interrogations hereinafter numbered and set forth as by the note hereunder written they are required to answer, that is to say:

1. Whether Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark comprise the firm of Clark & Company, and whether the defendants, as such firm, were on and before the 7th day of May, 1874, engaged at the city of Buffalo, in the northern district of New York, in the manufacture and sale of mop-heads, constructed in whole or in part on the principle or in the manner shown and described in either or both of said letters patent, and describe particularly and detail the mop-heads so manufactured and sold by them.

14 2. State when the defendants commenced the manufacture of the mop-heads inquired about in the first interrogatory, and the number of such mop-heads manufactured, and the number sold prior to the 8th day of May, 1874.

3. Whether the said letters patent No. 54860 were granted to Charles B. Clark, one of the said defendants, and Oliver S. Garretson, and whether said defendant Charles B. Clark assigned all of his right, title, and interest in said invention and letters patent to John D. Shepard, as hereinbefore set forth.

4. Whether the said letters patent No. 54860 were assigned to and are now owned by Oliver S. Garretson, as hereinbefore set forth.

5. Whether the said letters patent No. 67643 were granted to Oliver S. Garretson, and assigned to him by mesne assignments, as hereinbefore set forth.

JAY HYATT,
Sol'r, & of Counsel for Compl'ts.

(Endorsed:) Amendments to bill of compl't. Filed May 25, 1874.

Circuit court of the United States, northern district of New York. In equity.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK.

The joint and several answer of Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, defendants, to the bill of complaint of Oliver S. Garretson, complainant.

These defendants, now and at all times hereafter saving and reserving to themselves all manner of benefit and advantage of exception that can or may be had or taken to the many errors, insufficiencies, and imperfections in the said bill of complaint contained, for answer thereunto, or

15 to so much thereof as they are advised it is material or necessary for them to make answer unto, answering, say:

That they admit that they do business at the city of Buffalo, New York, under the firm name of Clark & Co.

And the defendants, further answering, admit, on information and belief, as to the defendants John K. Clark, Edwin L. Ferguson, and Henry R. Clark, that letters patent of the United States No. 54860 were granted on the 22d day of May, 1866, to said Charles B. Clark and O. S. Garretson, jointly, for an alleged improved mop-head, and that said Charles B. Clark afterwards sold and transferred his interest in said patent to one John D. Shepard, but whether or not the assignment to said Shepard was duly recorded as stated in said bill of complaint these defendants do not know and are not informed save by said bill of complaint, and leave the complainant to make such proof thereof as he may be advised is material.

And these defendants, further answering, say that they do not know and are not informed, save by said bill, whether or not the said John D. Shepard on or before the 11th day of November, 1871, by an assignment in writing, duly sold, transferred, and set over unto the complainant all his right, title, and interest in and to said patent, nor whether said assignment was duly recorded as stated in said bill, and leave the complainant to make such proof thereof as he may be advised is material.

And the defendants, further answering, on information and belief, admit that letters patent of the United States No 67643 were granted, on the 13th day of August, 1867, to the complainant for an alleged improved mop-head, but whether or not said last-mentioned patent was applied for and issued as stated in said bill these defendants do not know and are not informed save by said bill, and leave the complainant to make such proof thereof as he may be advised is material.

And these defendants, further answering, say that they do not know and are not informed, save by said bill, whether or not the com-
16 plainant is entitled to or owns or possesses the said two letters patent, but they deny that said letters patent have been acquiesced in by the public as stated in said bill.

And these defendants, further answering, on information and belief, as to the defendants John K. Clark, Edwin L. Ferguson, and Henry R. Clark, say that it is not true that the said Charles B. Clark and O. S. Garretson are or were at any time, in any manner, the joint inventors or discoverers of the alleged improvements, or of any or either of them, or of any part thereof described and claimed in their said joint letters patent No. 54860, as stated in said bill, but that, on the contrary thereof, each was, if an inventor of anything described or claimed therein, the sole and independent inventor or discoverer of a separate and independent part of the machine or apparatus described in said letters patent, and that that part of the alleged invention specified in the first claim of said patent in these words, to wit, "connecting the nut K with the collar which carries the movable jaw E E, by means of the lugs G G or their equivalent, in combination with the threaded shank of the jaw C, arranged and operating substantially as set forth," was not and is not the joint invention of said Charles B. Clark and O. S. Garretson, but that the same was and is the sole invention and discovery of the said Charles B. Clark alone, and without the coinvention or suggestion of said Garretson, and that the said Charles B. Clark did not jointly with said Garretson, nor alone, invent or discover

that part of said alleged joint invention specified in the second claim of said patent, to wit, "connecting the movable jaw E E with the collar D, by means of the bows *I I*, constructed and operating substantially in the manner and for the purpose specified," but that the subject-matter of said second claim was the invention and discovery of said Garretson alone, and that both said alleged improvements, which are specified and claimed in the two claims of said patent No. 54860, are separate and inde-
17 pendent things one from the other, and operate independently of each other, and that by reason of the premises said Charles B. Clark and O. S. Garretson could not lawfully obtain jointly such letters patent for things which they did not jointly invent or discover, and that the said letters patent No. 54860 were not granted according to law, and that by reason of the premises the said letters patent No. 54860 are wholly null and void.

And these defendants, further answering, say, on information and belief, as to the said John K. and Henry R. Clark and Edwin L. Ferguson, that the said Charles B. Clark, although knowing at the time of making application with said Garretson for said joint patent No. 54860 that he and said Garretson were each sole and independent inventors of the said separate and independent things respectively specified in said two claims of said patent, believing that, because said sole and independent inventions could be placed and used on the same machine or apparatus, although on separate and distinct parts thereof, he and said Garretson, who were at the time of said application, or had lately been, in partnership together, were joint inventors, and could obtain one patent together for their separate alleged inventions, and that he continued to believe so until in the month of September, 1874, when he was advised by counsel that upon the foregoing facts he and the said Garretson were not joint inventors within the meaning and intent of the patent laws, and that each ought to have applied for letters patent separately for their respective inventions.

And these defendants, further answering, on information and belief, deny that by virtue of the said several patents and assignments as mentioned in said bill said complainant became, or ever was, possessed of or vested with any exclusive rights to or in the alleged inventions described and claimed by the said letters patent.

And these defendants, further answering, deny that they have been, or now are, manufacturing, selling, or using machines or apparatus constructed in accordance with or containing the inventions, or either
18 of them, described in and by said bill alleged to be secured by said several letters patent; and deny that they have caused, or are causing, said complainant any damage, as in said bill alleged; and deny that they have refused to pay said complainant any profits received by them, as in said bill alleged; and say that they have not, and still do not, in any manner infringe upon any rights or privileges secured to said complainant by said several letters patent, or either of them.

And these defendants, further answering, deny that they have since the date of said assignment to said complainant of said patent No. 54860, or since the date of said patent No. 67643, or at any other time, manufactured, used, or sold, or that they continue to manufacture, use, or sell, machines or apparatus the right to which is or was secured by said letters patent, or either of them.

And these defendants, further answering, say that such mop-heads as they have manufactured, used, and sold were and are rightfully made under and in accordance with some or all of the following letters patent granted by the United States for improvements in mop-heads, to wit: letters patent No. 82383, dated September 22, 1868, granted to Charles B. Clark and E. L. Ferguson; No. 128711, dated July 9, 1872, granted to Charles B. Clark; and No. 145397, dated December 9, 1873, granted to Charles B. Clark; and these defendants deny that such mop-heads, so made and sold by them, embody or contain any invention of or belonging to said complainant, or are any infringement of any legal rights of said complainant.

And these defendants, further answering, say that they are informed, and believe it to be true, that the said patentees, Charles B. Clark and O. S. Garretson as aforesaid, or either of them, were not the original and first inventors and discoverers of the said invention and discovery, or of any material and substantial part of the thing, or of the principle and combination patented in and by the first claim of the said letters patent No. 54860, but that the same thing and the same principle and
19 combination, or substantially the same, had been previously combined by, and invented and discovered by, one Solyman Merrick, who resides, or resided, at Springfield, Massachusetts, and that the same was known to and used and combined by the said Merrick, at said Springfield, as early as March, 1848, and prior to the time when it is alleged in the said bill the same was invented by the said Charles B. Clark and O. S. Garretson; and also to W. C. Bemis, Amos Call, and other members of the Bemis & Call Hardware and Tool Company, of and at Springfield, Massachusetts, who had such knowledge prior to the year 1866; and also to A. W. Park and Byron Boardman, of and at Norwich, Connecticut, as early as the year 1865 or 1866; and to the members of the firm of Brown & Sterry, of and at said Norwich, in 1865 or 1866.

And further, that the same was also known to and used by one Albert D. Briggs, who resides, or resided, at said Springfield, as early as April, 1859; and that the same had been, anterior to any supposed invention or discovery thereof by said Charles B. Clark and O. S. Garretson, known to and used by James Sangster, who resides at Buffalo, New York, and who had such prior knowledge of the same at said Buffalo; and to James A. Taylor, who resides at East Hamburgh, New York, and who had such prior knowledge of the same at said East Hamburgh, and at Buffalo, New York, and at Lockport, New York, and to many others whose names are now unknown to these defendants, but whose names and residences when learned they pray leave to insert in this their answer, and that the same is described and shown in the following letters patent of the United States, to wit: Letters patent No. 23751, granted April 26, 1859, to Albert D. Briggs, for improved screw wrench; letters patent No. 5707, granted August 15, 1848, to Solyman Merrick, for improvement in screw wrenches; letters patent No. 58342, granted September 25, 1866, to R. H. Gray and
S. Abrams, assignees of R. H. Gray, for an improvement in lifting
20 and pressing screws; and letters patent No. 48027, granted May 30, 1865, to A. W. Park and C. J. Winters, for an improved tool; and letters patent No. 56166, granted July 10, 1865, to Byron Boardman, for an improved tool; and letters patent granted August 17, 1835, and

reissued May 17, 1842, to said Solyman Merrick, for an improvement in screw wrenches, and which patent was extended in 1849 for seven years from August 17, 1849; and in English letters patent No. 45, dated October 1, 1852, granted to Charles W. Rowley Richards, for improvement in tongs for screwing pipes and screws; and in a printed publication entitled "Technologische Encyklopaedie," by John Jos. Prechtel, and published at Stuttgart, Germany, to wit, in volume nine of that work, published in the year 1838, on pages 522 and 524, plate 187, figures 1, 2, 3; and in volume 14 thereof, published in the year 1846, on pages 28 and 29 and 33, plate 327, figures 1 to 5, and plate 328, figures 7 and 8; and also in a printed publication entitled "Lehrbuch der Ingenieur und Maschinen Mechanik," by Dr. Julius Weisbach, published at Braunschweig, in the years 1851, 1860, in volume 3, page 274, figure 294; and also in a printed publication entitled "Encyklopaedisches Handbuch des Maschinen und Fabrikwesens, &c.," by Carl Hartmann, published at Leipzig and Darmstadt, Germany, in the year 1838, and illustrated on plate 24, figures 5, 6, and 7.

And that, for the purpose of further showing the state of the art before and at the time of the date of said supposed invention, these defendants will put in evidence and use on the hearing of this cause letters patent of the United States No. 10237, granted November 15, 1853, to T. Randlett, for an improvement in mop-heads; also letters patent No. 50137, granted to Corydon Karr, September 26, 1865, for mop-heads; also letters patent No. 3682, being a reissue of original letters patent, granted February 15, 1859, to Luke Taylor, for improved mop-heads; also letters patent No. 64683, granted to Mason & Messinger, May 14, 1867, for improved
21 mop-head; also letters patent No. 47642, granted May 9, 1865, to Nelson Homes, for improved mop-head.

And these defendants, further answering, on information and belief, say that the construction and arrangement of connecting a nut with the collar of a movable jaw by means of lugs, or their equivalent, in combination with the threaded shank of another or stationary jaw was, prior to any supposed or alleged invention of said Charles B. Clark and O. S. Garretson, as described in said patent No. 54860, a well known construction and mechanical arrangement in the arts, and had been anterior to any such alleged or supposed invention by them, or either of them, known to and used by many persons, and among others by James A. Taylor, at Buffalo, East Hamburgh, and other places in the State of New York; and also by William H. Kirkholder, John H. Husted, and James Sangster, at said Buffalo.

And these defendants, further answering, on information and belief, deny that the said complainant was the first and original inventor or discoverer of the invention or thing described and patented, or of a substantial and material part thereof, claimed as new in the said letters patent No. 67643, so granted to complainant on the 13th of August, 1867, and these defendants, on like information and belief, allege that the said invention described and patented in said patent No. 67643, or material and substantial parts thereof, had been, anterior to any supposed discovery or invention thereof by the said complainant, described and patented in letters patent of the United States No. 58342, dated September 25, 1866, granted to R. H. Gray and S. Abrams, assignees of R. H. Gray, for an improvement in lifting and

pressing screws, and in letters patent of the United States No. 14485, dated March 18, 1856, granted to J. Z. A. Wagner for an improved method of adjusting reciprocating saws; and that the same is described in the printed works hereinbefore mentioned, entitled "'Technologische Encyklopædia,' by John Jos. Prechtel," and "Lehrbuch der Ingenieur
22 und Maschinen Mechanik," by Dr. Julius Weisbach, and Encyklopædisches Handbuch des Machinen und Fabrikwesens," &c., by Carl Hartmann, in the several volumes and at the several pages and plates of those works hereinbefore mentioned with respect to the patent No. 54860.

And these defendants, further answering, on information and belief, deny that the several supposed inventions described and claimed respectively in complainant's said letters patent Nos. 54860 and 67643 had not been known or used by any other persons before said supposed invention or discovery thereof by said Charles B. Clark and said complainant; and deny that the same, or either of them, are of great value or utility; and they deny that they have done anything to the injury of said complainant, as in his said bill alleged.

And these defendants, further answering, say, in answer to the first interrogatory of said bill as amended, that Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark comprise the firm of Clark & Company, and that they were, on or before May 7, 1874, engaged in Buffalo in the manufacture and sale of mop-heads, but that the mop-heads made and sold by them were not constructed in the manner described and claimed in either or both of the letters patent set forth in said bill of complaint, but were made in accordance with and under the authority of some or all of the letters patent of the United States Nos. 82383, 128711, and 145397, above mentioned.

And in answer to the second interrogatory, these defendants say that complainant has no right to inquire or know of them, by way of answer to said bill, the character and extent of their business, and has not shown or established any right to any discovery of the matters therein inquired about; and these defendants further answer that they stand ready at any and all times to render an account of all their business when required so to do by this honorable court.

23 And, further, that in obedience to an order of this court, made in this suit, they have rendered, and do now render, monthly accounts to this court of all mop-heads made and sold by them which are charged by said complainant to infringe his said letters patent.

To the third interrogatory these defendants have already made answer in the affirmative.

To the fourth interrogatory these defendants answer that they are informed and believe that an interest in said patent No. 54860 was assigned to said O. S. Garretson, but whether or not he now owns or has ever since continued to own said patent they do not know, and are not informed save by his said bill of complaint.

To the fifth interrogatory these defendants answer that they are informed and believe said patent No. 67643 was granted to Oliver S. Garretson, but whether or not it was assigned to him they do not know, and have not sufficient knowledge to form any belief thereon.

And these defendants deny all intention to injure or destroy any rights

or privileges secured to or belonging to the complainant, or to deprive him of any gain or profits to which he may be legally entitled by virtue of the premises.

And these defendants, further answering, deny that the said complainant is entitled to the relief, or any part thereof, in his said bill of complaint demanded.

And these defendants pray the same advantage of the facts and things herein set forth as if for the reason thereof the said bill had been demurred to where a demurrer would have been proper, and the same benefit thereof as if they had been specially pleaded to the said bill.

And these defendants submit to this honorable court that said complainant has no right to any further answer to said bill, or any part thereof, than is hereinabove contained, and no right to any injunction, account, or other relief prayed for in said bill; and these defendants pray
24 to be hence dismissed with their reasonable costs and charges in this behalf most wrongfully sustained.

CHARLES B. CLARK.
JOHN K. CLARK.
EDWIN L. FERGUSON.
HENRY R. CLARK.

F. A. MACOMBER,
Solicitor and of Counsel, and
J. VAN SANTVOORD,
Counsel for Defendants.

UNITED STATES OF AMERICA,
Northern District of New York, Erie County, ss:

Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, being by me duly sworn, depose and say, and each for himself says, that they have read the foregoing answer, and know the contents thereof, and that the same is true of their own knowledge, except as to those matters therein stated on information and belief, and as to those matters they believe it to be true.

CHARLES B. CLARK.
JOHN K. CLARK.
EDWIN L. FERGUSON.
HENRY R. CLARK.

Sworn before me this 28th day of September, 1874.
[L. S.] A. A. HOWARD,
Notary Public in and for Erie County.

[Endorsed:] Answer. Filed Sept. 30, 1874.

25 Circuit court of the United States, northern district of New York.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK, defendants. } In equity.

The replication of the above-named complainant to the answer of Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, defendants.

This repliant, saving and reserving to himself now, and at all times

hereafter, all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says that he will aver, maintain, and prove his bill of complaint to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the said defendants is uncertain, untrue, and insufficient to be replied unto by repliant; without this, that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true. All which matters and things this repliant is and will be ready to aver, maintain, and prove, as this honorable court shall direct, and humbly prays as in and by his said bill he has already prayed.

JAY HYATT,
Solicitor for Complainant.

(Endorsed:) Replication. Filed Oct. 5, 1874.

26 United States circuit court, northern district of New York. In equity.

OLIVER S. GARRETSON, COMPLAINANT,
against
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. Ferguson and Henry R. Clark, defendants.

April 28th, of January term, 1875.

This cause came on to be heard at this term and was argued by counsel, and thereupon, upon consideration thereof, it was ordered, adjudged, and decreed, and it is hereby ordered, adjudged, and decreed, that the patents of the complainant whereon this suit is founded are valid patents and owned by the complainant, as alleged in the bill of complaint; not anticipated by any of the devices set up by the defendants as showing want of novelty or as showing that the patentees were not the first inventors. That Clark and Garretson were the joint inventors of "the improved mop-head," or the combination of devices claimed in the patent granted to them, numbered 54860, bearing date May
27 22d, 1866, and that the complainant is by assignment the owner and holder thereof, as alleged in the bill of complaint.

That the defendants' mop-heads, which it was admitted they manufacture, do infringe the first claim of the said letters patent of May 22d, 1866, and the whole claim of the letters patent No. 67643, dated 13th August, 1867.

And it is further ordered, adjudged, and decreed that the complainant do recover of the defendants the profits made and received by the defendants, and the damages, if any, over and beyond the amount of such gains and profits suffered by the complainant by reason of the infringment and violation of the rights of the complainant, which it is adjudged have been so committed by the defendants, together with the costs of the complainant in this cause to be adjudged; and it is hereby referred to George J. Sicard, esq., of Buffalo, who is hereby appointed master pro hac vice to take proofs of and to compute the amount of the said profits and damages, and report the same to this court, with leave to either party to move the court upon notice for special instructions to said master in reference to the taking of said account.

And it is further ordered, adjudged, and decreed that the complainant, on such accounting, have the right to cause an examination of the defendants, ore tenus or otherwise, and also the production of the books, vouchers, and other documents of the defendants, and that the said defendants attend for such purpose before said George J. Sicard, master, from time to time, as he shall direct.

And it is further ordered and decreed that a perpetual injunction be issued under the seal of this court, directed to the defendants, restraining them, and each of them, their agents and servants, from further making or selling mop-heads, according to the prayer of the bill of complaint in this action.

28 And it is further ordered that the question of the amount of the complainant's costs be reserved until the coming in of the report of said George J. Sicard, and that a final decree be had for the same, together with the profits and damages which shall be finally adjudged to be payable to the complainant.

Enter:

L. B. WOODRUFF,
Circuit Judge.

(Endorsed:) Decree. Filed May 11th, 1875.

29 United States circuit court for the northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK.

To the United States circuit court for the northern district of New York:

I, the undersigned, to whom it was referred as master pro hac
30 vice under the decree of this court made in the above-entitled action, and dated the 28th day of April, 1875, to take proof of and to compute the amount of the profits made and received by the defendants, and the damages (over and beyond the amount of such gains and *and* profits), if any, suffered by the complainant by reason of the infringment and violation of the rights of the complainant adjudged by said decree to have been so committed by the defendants, and to report the same to this court, do respectfully report:

That I have been attended from time to time by the parties complainant and defendants, and by their counsel, and have taken the proofs so as aforesaid offered before me. And the said proofs, with all the exhibits produced before me, are herewith transmitted to this court.

And I do certify the said proofs to be correct, and that each of the witnesses produced was by me sworn in due form before the taking of his testimony, and that at the close of his said testimony, the same having been read over to him, such testimony was subscribed by him in my presence.

And I find and report that the complainant in this case has not offered before me evidence of the damages suffered by him, or of profits realized by the defendants by reason of the infring'ment and violation by the defendants of the rights of the complainant in the invention and improvement referred to in the decree.

That the reasons for this finding are more fully stated in the decision or opinion, which is herewith respectfully submitted.

And I do therefore report that the said complainant is entitled under said decree to nominal damages only against said defendants.

All of which is respectfully submitted.

GEO. J. SICARD,
Master pro hac vice.

Dated May 15, 1876.

(Endorsed:) Report of master on accounting. Filed May 17, 1876.

31 United States circuit court, northern district of New York.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHARLES B. CLARK ET AL., DEFENDANTS. } In equity.

My former attorney, Jay Hyatt, having become deceased, I hereby substitute James A. Allen, of the city of Buffalo and State of New York, as my solicitor in this action, in the place and stead of the late Jay Hyatt.

Dated May 16, 1876.

OLIVER S. GARRETSON.

To Hon. CHARLES MASON,
Clerk of the United States Circuit Court in and for said District:

Please to take notice that I have been substituted as the solicitor for the complainant in the above-entitled cause, in the place and stead of Jay Hyatt, deceased, and request that a proper order be entered in your office to that effect.

Dated May 16, 1876.

JAMES A. ALLEN,
Solicitor for Complainant, Buffalo, N. Y.

(Endorsed:) Stipulation for substitution. Filed May 20, 1876.

32 United States circuit court, northern district of New York.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK, defendants. } In equity.

Exceptions taken by the said complainant to the report of George J. Sicard, a master of this court pro hac vice, to whom, by an interlocutory decree of this court made on the 28th day of April, 1875, it was referred to take proof of and to compute the amount of the profits made and received by the defendants, and the damages (over and beyond the amount of such gains and profits), if any, suffered by the complainant by reason of the infringement and violation of the complainant's rights, adjudged by said decree to have been so committed by the defendants, and to report the same to this court, and which report bears date the 15th day of May, in the year 1876.

FIRST EXCEPTION.—For that the said master hath in and by his said

report certified that the complainant in this cause has not offered before him evidence of damages suffered by him, or of profits realized by the defendants by reason of the infringment and violation by the defendants of the rights of the complainant in the inventions and improvements referred to in the decree; whereas the said master ought to have certified that the said complainant had offered before said master evidence of damages suffered by him, as well as of the profits realized by the defendants, by reason of the infringement and violation by the defendants of the rights of the complainant in the inventions and improvements referred to.

33 SECOND EXCEPTION.—For that the said master hath in and by his said report certified that the said complainant is entitled under said decree to nominal damages only against said defendants; whereas the said master ought to have certified that the said complainant was entitled under said decree and the proofs before said master to actual damages, and ought to have assessed in favor of said complainant the amount of such actual damages and reported the same.

THIRD EXCEPTION.—For that the said master hath in and by his said report omitted and refused to certify to the court that the said complainant in this cause had offered and produced before the said master proofs showing the amount of actual damages which the said complainant had sustained by reason of the infringement and violation of the rights of the complainant referred to.

FOURTH EXCEPTION.—For that the said master hath in and by his said report omitted and refused to assess and compute in favor of the complainant, as directed by the said decree, the amount shown by the proofs before said master of actual damages which the complainant has sustained by reason of the said infringement and violation.

FIFTH EXCEPTION.—For that the said master hath in and by his said report omitted and refused to assess and compute in favor of the said complainant, as directed by the said decree, the amount shown by the proofs before said master of actual profits made and received by the defendants by reason of the infringement and violation of the rights of the complainant adjudged by the said decree to have been committed.

SIXTH EXCEPTION.—For that the said master in and by his said report hath omitted and refused to certify to the court that the actual damages sustained by the complainant, to be assessed under the said decree

34 herein, for each and every dozen of the mops manufactured and sold by the defendants in infringement of the complainant's rights, which the complainant would have manufactured and sold but for such infringing manufacture and sale by the defendants, were and are the difference between what the manufacture and sale per dozen of such mops would have cost the complainant according to Complainant's Exhibit No. 2 and Complainant's Exhibit No. 3, or one of them, and the price at which the said complainant would have sold the said mops per dozen, according to Defendants' Exhibit B, substantially; and that the aggregate of such damages was and is the said difference multiplied by the number of dozens of such mops manufactured and sold by the defendants, which the complainant but for such infringement would have manufactured and sold.

SEVENTH EXCEPTION.—For that the said master, in and by his said report, hath omitted and refused to certify to the court that the amount of the profits made and received by the defendants by reason of the infringe-

ment and violation of the rights of the complainant adjudged by the said decree to have been committed by the said defendants, were and are, for each and every dozen of the infringing mops made and sold by the defendants, the difference between what the manufacture and sale per dozen of the infringing mops manufactured and sold by the defendants cost to the said defendants, according to Defendants' Exhibit E, as surcharged and rectified by the other proofs in the case, and what the said infringing mops sold for per dozen, according to Defendants' Exhibit A, and that the aggregate of such profits was and is said difference per dozen multiplied by the whole number of dozens of mops shown by said Exhibit A to have been made and sold by said defendants in infringement as aforesaid, viz, 12,699½ dozens.

35 EIGHTH EXCEPTION.—For that the said master received evidence before him on the reference under the said decree relating to the Seymour mop and brush-holder and the price thereof, and overruled the complainant's objection thereto.

NINTH EXCEPTION.—For that the said master received in evidence before him, on the said reference, the defendants' Exhibit G, and overruled the complainant's objection thereto.

TENTH EXCEPTION.—For that the said master received in evidence before him, on the said reference, the defendants' Exhibit H, and overruled the complainant's objection thereto.

ELEVENTH EXCEPTION.—For that the said master received evidence relating to the market for builder's hardware in 1874, and overruled the complainant's objection thereto.

TWELFTH EXCEPTION.—For that the said master received in evidence the defendants' Exhibit I, and overruled the complainant's objection thereto.

THIRTEENTH EXCEPTION.—For that the said master received in evidence, on said reference, testimony as to the amount of defendants' sales of said Exhibit I since July 1, 1875, and overruled the complainant's objection thereto.

FOURTEENTH EXCEPTION.—For that the said master received in evidence testimony relating to whether there was a substantial difference in the mode of operation between defendants' Exhibits D and H, and overruled the complainant's objection thereto.

FIFTEENTH EXCEPTION.—For that the said master received in evidence the defendants' Exhibit J, and overruled the complainant's objection thereto.

SIXTEENTH EXCEPTION.—For that the said master received in evidence on the said reference testimony as to the cost of making defendants' Exhibit I and overruled the complainant's objection thereto.

36 SEVENTEENTH EXCEPTION.—For that the said master received in evidence the defendants' Exhibit K, and overruled the complainant's objection thereto.

EIGHTEENTH EXCEPTION.—For that the said master excluded from being received before him material evidence offered by the complainant, and did sustain the defendants' objection thereto.

NINETEENTH EXCEPTION.—For that the said master received in evidence testimony offered by the defendants, and overruled the complainant's several objections thereto.

TWENTIETH EXCEPTION.—For that the said master has admitted evidence on the part of the complainant establishing the lawful measure of damages in his favor, and overruled the defendants' objections thereto, thereby holding such evidence to be admissible and competent, whilst at the same time the said master in his report has refused to consider and give effect to the said evidence so received and admitted and so ruled by him to be competent and admissible for the purpose of establishing such damages.

TWENTY-FIRST EXCEPTION.—For that the said master has admitted evidence establishing the amount of the profits made and received by the defendants by reason of their infringements, and has held such evidence to be competent and admissible, whilst at the same time in his said report the to be said master has refused to consider and give effect in and by his findings to the said evidence so received and admitted by him.

Wherefore the said complainant doth except to the said master's said report, and appeals therefrom to the judgment of this honorable court.

Dated June 2d, 1876.

JAMES A. ALLEN,
Sol'r for Complainant, Buffalo, N. Y.

(Endorsed:) Exceptions of complainant to the master's report. Filed June 7, 1876.

37 At an adjourned term of the circuit court of the United States of America for the northern district of New York, in the second circuit, held at the City-Hall in Utica, on Tuesday, the 16th day of March, in the year of our Lord one thousand eight hundred and eighty—

Present, the honorable Samuel Blatchford, circuit judge.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHARLES B. CLARK, JOHN K. CLARK, Edward L. Ferguson, and Henry B. Clark, defendants. } In equity.

The decrees of the court on final hearing on pleading and proofs in the above-entitled cause having been made and entered on the eleventh day of May, A. D. 1875, whereby, among other things, it was ordered, ad-
38 judged, and decreed that the complainant do recover of the defendants in said cause the profits made and received by the defendants, and the damages, if any, over and beyond the amount of such gains and profits suffered by the complainant by reason of the infringement and violation of the rights of the complainant which it is adjudged have been committed by the defendants; and whereby it was referred to George J. Sicard, esq., of Buffalo, as master pro hac vice, to take proof of and to compute the amount of said profits and damages and report the same to the court; and whereby it was decreed that on the coming in of the report of the said George J. Sicard a final decree be had for the profits and damages which should be finally adjudged to be payable to the complainant; and the report of the said George J. Sicard, master as aforesaid, bearing date the 15th day of May, A. D. 1876, having been made and filed
39 with the clerk of this court on or about the 17th day of May,

A. D. 1876, whereby he found and reported that the said complainant had not offered before him evidence of the damages suffered by him or of the profits realized by the defendants by reason of the infringement and violation of the defendants of the rights of the complainant in the invention and improvements referred to in the decree, and did report that the said complainant is entitled under said decree to nominal damages only against said defendants; the proofs, testimony, and exhibits taken and produced before the said master being certified by the said master, and with his said reports transmitted to the said court and filed with the said clerk; and the said complainant having duly made and filed with the clerk of said court in the said cause exceptions to the said report of the said master, bearing date 2d day of June, A. D. 1876, and filed with said clerk on
40 the 7th day of said June; and the said cause having been duly noticed for final hearing on said exceptions to said report, and further directions on the foot of said decree for the stated term of said court, held at the court-house, in the village of Canandaigua, in said northern district of New York, on the 3d Tuesday in June, A. D. 1878, at which time and place the said cause was argued by Mr. James A. Allen, of counsel for the complainant, in support of the said exceptions, and by F. A. Macomber, esq., of counsel for the defendant', in opposition thereto, and in support of the said report and the finding of the said master, and the decision of the said court upon the said exceptions having been subsequently made and filed, whereby each and every of the exceptions of the complainant was overruled, and it was ordered that a final decree be entered in the said cause in accordance with the said master's report therein, and awarding
41 to the said complainant the costs of the suit, except the cost of the reference before the master, and of his report, and of the exceptions, and of the hearing thereon, and awarding to the defendants the costs of such reference, and report, and exceptions, and hearing:

Now, on motion of Francis A. Macomber, solicitor for the said defendants, it is ordered, adjudged, and decreed, and the court, by virtue of the power and authority therein vested, doth order, adjudge, and decree that the said report of the said master hereinbefore referred to be, and the same is hereby, in all things ratified and confirmed, notwithstanding the said exceptions of the said complainant and each and every of the same.

And it is further ordered, adjudged, and decreed, and this court, by virtue of the power & authority therein vested, doth order, adjudge, and decree that the said defendants Charles B. Clark, John K. Clark, Edward L. Ferguson, and Henry B. Clark, pay to the said complainant
42 for the profits and damages aforesaid the sum of six cents only.

And it is further ordered, adjudged, and decreed, and this court, by virtue of the power and authority therein vested, doth order, adjudge, and decree that the said defendants also pay to the said complainant his cost of this suit prior to the proceedings before said master, taxed at $209.19, and that the said complainants pay to the said defendants their costs of their reference before the said master and of his report and of the exceptions and of the hearing thereon, taxed at the sum of $198.40, and that the said complainant have execution against the said defendants for the excess in his favor, amounting to the sum of $10.79.

And it is further ordered, adjudged, and decreed that a perpetual injunction issue under the seal of this court directed to the defendants, re-

straining them and each of them, their agents and servants, from directly or indirectly making, using, or selling mop-heads or mops containing or embodying the inventions described and claimed in the complainant's said letters patent No. 54860 and 67643, or either of the same, pursuant to the prayer of the bill of complaint in this cause.

43

SAM'L BLATCHFORD.

(Endorsed:) Final decree. Filed March 16, 1880.

Whereupon the said pleadings, process, orders, master's report, and exceptions thereto, and the final decree, together with other papers in said cause, are duly annexed hereto, and this decree is duly signed and enrolled pursuant to the rules and practice of this court this 19th day of March, A. D. 1880.

44

WILLIAM H. BRIGHT, *Clerk.*

(Endorsed:) Enrolled decree. Damages, 8.06; costs, 10.79—$10.85. Filed March 19, 1880, 6 o'clock p. m.

United States circuit court, northern district of New York.

45

OLIVER S. GARRETSON }
vs. } In equity.
CHARLES B. CLARK ET AL. }

Testimony on the part of the complainant, taken before me this 10th day of October, 1874.

Mr. Hyatt, for complainant; Mr. Macomber, for defendants.

Counsel for complainant introduces in evidence a certified copy of letters patent, number 54860, granted to Charles B. Clark and O. S. Garretson, dated May 22d, 1866, for improved mop-head, which is marked by me "Complainant's Exhibit No. 1; G. G., Examiner."

Also a copy of an assignment from John D. Shepard to O. S. Garretson, dated Nov. 11, 1871, of said Shepard's interest in said patent, Exhibit No. 1, which is marked "Complainant's Exhibit No. 2; G. G., examiner"—it being admitted in the answer that said Charles B. Clark did, on the 17th day of February, 1869, assign all of his interest in said patent to said John D. Shepard.

Also a certified copy of letters patent No. 67643, dated Aug. 13, 1867, granted to O. S. Garretson, for improved mop-head, which is marked "Complainant's Exhibit No. 3; G. G., Examiner."

Counsel for defendant admits the execution of assignment Exhibit No. 2.

Also a model or sample of a mop-head claimed to be a sample of the mop-head shown and described in letters patent No. 1 is also put in evidence, and marked "Complainant's Exhibit No. 4."

A mop-head claimed to be a sample of the mop-head shown and described in letters patent Ex. No. 3 is also put in evidence, and marked "Exhibit No. 5; G. G., Examiner."

46

Three mop-heads are also put in evidence and marked respectively "Complainant's Exhibits Nos. 6, 7, 7½ G. G., Examiner;" (7½ being the same as Ex. 7 with rivets loosened).

The defendants' counsel admits that at the time of filing the bill in this case they had made and sold and were making and selling, at Buffalo, mop-heads represented by said Exhibits marked 6, 7, and 7½.

Complainant also introduces in evidence another mop-head which is marked "Complainant's Exhibit No. 8; G. G., Examiner.

The defendants admit that at this date, to wit, the 10th day of October, 1874, they make and sell at Buffalo mop-heads like said Exhibit No. 8, but claim that said Exhibit No. 8 is irrelevant.

GEO. GORHAM, *Examiner.*

I certify that the foregoing evidence was taken by and before me on the 10th October, 1874, and that the exhibits mentioned therein were, by consent of counsel, agreed to be left with Examiner Sicard.

GEO. GORHAM, *Examiner.*

U. S. circuit court, northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK.

Mr. Hyatt, for complainant; Mr. Macomber, for defendants.

Counsel consent to proceed with the evidence on behalf of the complainant at the office of Geo. J. Sicard, in Buffalo, N. Y., on the 22d day of December, 1874, at 10½ o'clock a. m., subject however to a postponement of one day if requested by complainant's counsel.

DECEMBER 23D, 1874.

Mr. Hyatt appeared for the complainant, and Mr. Macomber for the defendants. The following testimony then taken before me on behalf of the complainant.

47 OLIVER S. GARRETSON, affirmed for the complainant, testified as follows:

My name is Oliver S. Garretson; age, about 31 years; residence, Buffalo, N. Y.; occupation, manufacturer of hardware.

Ques. 2. Please state what this model which I hand you represents; and give the history of the same.

Ans. This model was made by myself, and represents the mop-head patented by Timothy Randlett, a certified copy of which patent is in evidence marked "Defendants' Randlett Exhibit." This mop-head not being in market, I made this exhibit; one portion of it is made of wood. The revolving collar is made of wood. In the mop-head, as patented, this collar should be made of metal. Otherwise, it correctly represents said mop-head.

(Complainant here offers in evidence the mop-head referred to by witness which is marked "Complainant's Exhibit No. 9, Randlett Model.")

Ques. 3. What first called your attention to the subject of making improvements in mop-heads, and what was your employment at that time?

Ans. In part of the year 1865 and the forepart of the year 1866 I was in the employment of the Townsend Manufacturing Company, whose office

and store was at 115 Main Street, Buffalo, N. Y., at that time. I was employed by them as foreman of their shop, in the manufacture of apple parers, and afterwards to perfect certain other inventions, and to make patterns for the same, and also to superintend the construction of looms for weaving wire cloth. I was also working a portion of my time for myself on patterns for blind-hinges that I had invented. My shop, or the room in which I worked in the beginning of the year 1866, was over the store of the Townsend Manufacturing Company, on the third or fourth floor. My attention was called to the subject of mop-heads, and making improvements therein, by having seen and examined a mop-head
48 patented by Corydon Karr, then managing director of the Townsend Manufacturing Company; a certified copy of the patent referred to is in evidence in this suit. This Karr mop that I refer to was defective in that the handle was pivoted to the cross-head, the handle being revolved to clamp or release the mop-cloth. There was a jam-nut working on a thread on the handle of the mop against the nut or collar, to which was secured the ends of the wire binder, also called the moveable jaw. When the cloth was inserted between the jaws, and the handle revolved to clamp the mop-cloth, this jam-nut was designed to be screwed up against the nut which carried or composed a portion of the moveable jaw, to prevent the handle from revolving and releasing the mop-cloth while the mop was being used. On examining this mop and practising with it by striking the mop on the floor, as it would be struck in use, I found that this jam-nut by the jarring would soon work loose, and allow the mop-cloth to be released or work loose. The cross-head being pivoted to the handle by a wire rivet, this joint was also liable to become worn out, or the head of the rivet broken off, and thus render the mop unfit for use.

Ques. 4. Do you know whether this Karr mop-head, which you describe, was ever manufactured or sold or put in public use; and, if so, to what extent?

Ans. There was at that time samples of the mop-head in the store of the Townsend Manufacturing Company; and I afterwards saw a great many castings of the same—three or four barrels—I should judge, but I think they were never put into the market, as I afterwards bought the handles that were designed to be used in said castings.

Ques. 5. Give a history of the invention shown and described in Complainant's Exhibit No. 1, stating fully the circumstances attending the same.

Ans. Having seen this Karr mop that I referred to, and noting its defects, I began thinking as to how it could be improved. After studying over the matter for some time I finally came to the conclusion that
49 I could make an improvement on the same. One day, some time about the first of February or forepart of February, I think it was, 1866, I went to the shop that I have before referred to, where my drawing tools and materials were which I had been using in planning and draughting on the wire looms which I have above referred to, and took my drawing tools and papers and sat down near the stove, and began thinking as to how I should improve the mop. While thus engaged, Charles B. Clark came in. Knowing that he was somewhat of an inventor, and being interested with him in certain blind-hinges of my invention, and calcu-

lating to go into business with him in the manufacture of said blind-hinges and other articles, I told him what I was doing, and that I was thinking of making an improvement in mop-heads, and gave him my views as to what I could do so far as I had them perfected. We then began to talk upon the subject, he suggesting some things and I suggesting some. We considered the defects of the Karr mop, and talked of how it could be improved. During the conversation we had perfected plans for a mop-head, and made a drawing of the same. The drawing I here produce. After using it at that time for the purpose of making the models, and showing it to some persons, I put it away with my other papers, and have had it ever since. We then made some preliminary patterns for a mop. Mr. Clark, I think, made some of the patterns, and I done some of the work. I think, however, I done most of it. About the 21st of February, having had some brass castings made, I fitted up two brass mop-heads. One of them was designed and used for a Patent Office model; the other one, I believe, I still have in my possession, although I have not seen it lately. About the 27th of February, 1866, Mr. Clark and myself applied to a patent agent by the name of J. Fraser & Co. to obtain us a patent for our improvement in mop-heads. The application was prepared and filed at the Patent Office, and the patent issued to us.

Ques. 6. About how long did this first interview with Mr. Clark you have referred to last, and was or was not this the first interview you had had with him in respect to improvement in mop-heads?

Ans. I think the interview lasted for some three or four hours, according to the best of my recollection. I don't recollect of having any previous interview with him in respect to improvement in mop-heads. We may have had some talk in regard to the Karr mop, but nothing as regards improvements by Mr. Clark or myself in the same. I do not recollect of any talk of the improvements as shown in patent Exhibit No. 1 before that time. I am certain there was no conversation before that as to these particular improvements.

Ques. 7. Please state, if you recollect, who was the draughtsman, yourself or Mr. Clark, in making this drawing you have referred to. And state, if you can, more particularly as to the suggestions that were made by either of you, and in the order in which they occurred, as nearly as you can recollect the same.

Ans. Mr. Clark, at that time, being a better draughtsman than myself, done the most of the drawing. The large sketch of the mop-head was almost entirely, if not entirely, made by Mr. Clark. Some of the sketches, the one shown marked No. 1, on the upper left hand corner, was partially made by myself. I cannot recollect definitely all of just what was said at that interview, but I think the sketch Fig. 1 was first made, showing the nut extending through the collar, but at that time we had not found any practical way of connecting the nut and collar together. I now see written under this sketch, in what I believe to be the handwriting of Mr. Clark, the words "they cannot unlock it." This writing has been on the sketch since the day the drawing was made, as above referred to, to the best of my recollection. During the conversation, and after different modes of constructing the mop had been suggested, first by one and the other, I believe Mr. Clark suggested connecting the nut and collar to-

gether, as shown in this sketch, by means of lugs fitting over and
51 around a flange on the nut. I then suggested making the cross-head and shank of the mop in a solid piece or one casting, to obviate some of the defects in mop-heads where the handle is pivoted to the cross-head. After this connection had been made, we saw that by making the binder of a proper shape the collar of the binder or loose jaw could be moved close up against the cross-head, and the mop-head thus be made more compact, and by inserting the wires into the outer side of the collar, as shown in the sketch, the wire of the loose jaw could also be more securely attached to the collar. By this construction of binding wire and collar, the thread on which the flange nut works could be made on the socket of the main cross-head, and thus make the mop-head, in main length, considerably shorter and lighter, and more compact than they had formerly been made. I think the manner of connecting the wire shown in the sketch was suggested by myself after our consultation on the subject, and during the interview.

Ques. 8. Are these the only drawings you have any knowledge of that were made at or about the time you have referred to, showing these improvements?

Ans. They are.

(Complainant's counsel here offers in evidence the drawing referred to by witness, which is the one marked, during the examination before me of the witness Charles B. Clark, "Sketch G. J. S.," and shown to him.)

Ques. 9. State when the sketches marked figure 2 and figure 3 on this drawing were made, and what they represent.

Ans. I think sketches figure 2 and figure 3 were made the same day the rest of the sketch was made. Figure 2 represents a blind catch, I believe, or something that was intended for a blind catch, and resembles very much in its general shape a sash lock patented by Mr. Charles B. Clark before that time. I am not positive, but I think we proposed obtaining a patent for something of that kind. Figure 2, as a blind
52 catch. Figure 3, I believe, represents the hook of a meeting rail lock for windows, which I was planning at or about that time.

Ques. 10. Who, if any person, was present at this interview between yourself and Mr. Clark?

Ans. Cyrus L. Garretson and Joel G. Garretson were at that time working in this room on looms for weaving wire, under my directions. Their work was mostly wood-work. They had some lumber or plank on which they were working, laying on trestles or saw-horses not far from the stove. Albert Storer had been working there before this time, and worked there after it, but I do not recollect whether he was there or not at this particular time.

Ques. 11. Where was this stove you referred to situated with reference to the front or Main street end of the building?

Ans. I think it was some fifteen or twenty feet from the front end of the room.

Ques. 12. Did Mr. Clark, at this time you refer to, bring with him, when he entered the room, and show to you any drawing or sketch of any improvement in mop-heads?

Ans. I do not think he did. I have no recollection of any such sketch being brought and showed to me. Am quite positive he did not.

Ques. 13. How do you fix the time when this interview took place?

Ans. I fix the time from a memorandum or history of my transactions, and of what time I was working for the Townsend Manufacturing Company at or about that time.

Ques. 14. Do you know when Cyrus L. and Joel G. Garretson commenced working for the Townsend Manufacturing Company? And state the circumstances, if any, that enable you to fix the time.

Ans. I do know when they began work there. It was the first week in January, 1866. I was at Westfield, New York, working for the Townsend Manufacturing Company for a few days about the last of De-
53 cember, and came home just before New Year's Day, 1866. On arriving at the depot in Buffalo I met brother Joel, who had just come from the West while I was absent, and that evening we went up to Mr. Charles B. Clark's, and there we met Cyrus L. Garretson and my mother. They came from the West under arrangements I had previously made with the Townsend Manufacturing Company, and went to work within a day or two for said company.

Ques. 15. You state that you do not recollect definitely all the conversation that passed between you and Mr. Clark at this interview; do you now recollect that the two features of invention described and separately claimed in letters patent, Exhibit No. 1, were each the result of the joint discussions and suggestions made by yourself and Mr. Clark?

(Objected to on the ground that it calls for a conclusion, and as incompetent.)

Ans. I do recollect that they were each of them the result of our mutual consultations on the subject at that time.

Ques. 16. When did you first learn that the defendants were manufacturing mop-heads, or were about to engage in the manufacture of mop-heads? And what steps, if any, did you take to induce them not to engage in the manufacture of such mop-heads, or to desist from such manufacture?

(Objected to by defendants' counsel as immaterial.)

Ans. I heard at several times during the year 1873 that they were preparing to manufacture mop-heads; and on two or three different occasions I went to the office and works of Clark & Co. and took my patent papers with me, the patent set forth in the bill of complaint in this action, and told them that I had such patents, and showed them, or offered to show them to them, and told some of the members of the firm not to engage in the manufacture of mop-heads in infringement of my patents, and that if they did not desist I would commence legal proceedings against them.

54 Ques. 17. Do you know whether Charles B. Clark, or any other member of the firm of Clark & Co., were acquainted with both of your said letters patent before they engaged in the manufacture of mop-heads?

(Objected to as immaterial.)

Ans. Charles B. Clark was acquainted with both of said letters patent, and I believe the other members of the firm were also so acquainted before they commenced the manufacture of mop-heads.

Ques. 18. How many mop-heads have you manufactured and sold, either yourself individually or in connection with others, since spring of 1869, like, or substantially like, Complainant's Exhibit No. 5?

(Same objection as before.)

Ans. I have manufactured about six hundred thousand since the spring of 1869 substantially like said exhibit.

Ques. 19. In the manufacture of the mop-head, as described in and shown by Complainant's Exhibits Nos. 1 and 4, can the collar and nut be cast so as to be connected together, as shown in said exhibits, without requiring said parts to be finished or dressed by hand?

(Objected to as immaterial.)

Ans. The nut and collar can be so cast that they can be connected together without any finishing by hand; and they were so made when we were manufacturing that particular kind of mop of the construction of Exhibit 4.

Ques. 20. Do you know to what extent mop-heads, like that described in Defendants' Randlett Exhibit, Defendants' Homes Exhibit, Defendants' Mason & Messenger Exhibit, Defendants' Barnes Exhibit, and Defendants' Exhibits I and F (all being mop-heads), have been sold and introduced into public use, and to what extent they are now in market? If so, state to what extent they have been sold, and the means you have for determining the same.

(Objected to as immaterial.)

55 Ans. I am, and have been, quite well acquainted with the manufacture and sale of mop heads in the United States for the last seven or eight years, having visited most of the large cities where such goods are sold at wholesale, and talked with dealers in the same on the subject. Defendants' Randlett Exhibit, Defendants' Barnes Exhibit, Defendants' F Exhibit, and Defendants' I Exhibit have not been manufactured and sold or used in the United States to any considerable extent since I have been acquainted with the mop market. Defendants' Mason & Messenger Exhibit I believe was never manufactured and put on the market, never having seen it or heard of it in the market as being on sale. Defendants' Homes Exhibit was manufactured and sold to a very limited extent some years since, but I have not found any of them on sale for some considerable time, one or two years back.

Ques. 21. State if you recollect whether you were sitting by the stove during the whole of the interview you had with Mr. Clark; and, if not, to what part of the room did you change your position during the remainder of the interview?

Ans. I believe we remained near the stove most of the time. I have no recollection of any considerable portion of the interview taking place in any other part of the room. That was my place where I usually did my draughting and planning on a sort of table made of boards laid across saw-horses. This table was between the stove and my work-bench.

On being cross-examined the witness said:

Cross Ques. 1. Was this the room referred to by Mr. Storer, the witness?

Ans. It was the room in which Storer worked, and which I suppose he referred to.

Cross Ques. 2. When did you make the Complainant's Exhibit No. 9, Randlett Model?

Ans. I made it yesterday or day before.

56 Cross Ques. 3. In the last of 1865 and the forepart of 1866 you were brother-in-law of the defendant Charles B. Clark, were you?

Ans. I was.

OLIVER S. GARRETSON.

Examination taken, reduced to writing, read over to the witness, and by him subscribed and sworn to before me this 23d day of December, 1874.

GEO. J. SICARD, *Examiner.*

JOEL G. GARRETSON, affirmed and examined as a witness for the complainant, testified and said:

My name is Joel G. Garretson; residence, Buffalo, N. Y.; age, about 33 years; occupation, manufacturer of window fastenings.

Ques. 1. Were you ever in the employ of the Townsend Manufacturing Company? If so, state when; fix the time as definitely as you can.

Ans. I was. I commenced to work for the Townsend Manufacturing Company on the 3d day of January, 1866. I know the date by a diary I kept at the time.

Ques. 2. At what work were you employed during the month of February, 1866, and where?

Ans. I was working on looms. It was on wook-work, in the Townsend Manufacturing Company building, upstairs.

Ques. 3. Were you ever present or in the room where you were at work while an interview took place between Oliver S. Garretson and Charles B. Clark, in respect to improvements in mop-heads? If so, state when.

Ans. I was in the room where I was at work when such an interview took place. It was some time in the first part of 1866; I think in the month of January, but won't be positive.

Ques. 4. State, so far as you recollect, what took place between Oliver S. Garretson and Charles B. Clark at this interview you have referred to.

57 Ans. It was in the morning some time; somewheres the middle of the forenoon, about 8 or 9 o'clock, perhaps. Oliver S. Garretson was sitting near the stove, and had some paper and draughting instruments, when Mr. Charles B. Clark came in the room. They soon commenced a conversation respecting the plans that Oliver S. Garretson seemed to be making. They talked for a while, and then went to or near the front window. They consulted over different points of a mop-head, and together they made a drawing. I think Mr. Clark did the most of it.

Ques. 5. Were you in their presence, or did you see the drawing which they made at that time?

Ans. I saw them making a drawing. I saw the drawing while they were working on it; but I cannot tell whether it was finished or not.

Ques. 6. From what you heard of the conversation at this time and saw of the drawing, did you learn what were the improvements they were talking about and representing by the drawing?

Ans. I did learn, as I can best remember now, what they were.

Ques. 7. State whether you recognize the drawing marked "Sketch, G. J. S.," which I now hand you, as being similar or dissimilar to the drawing which you saw made at the time you refer to.

(Objected to as immaterial.)

Ans. It is similar to the draft there made.

Ques. 8. How long did this interview last, according to your best recollection?

Ans. I think it was towards noon from the time it first commenced.

Ques. 9. From the conversation, as you now recollect it, had at that time, did you understand whether the improvements represented by the drawing and which they were conversing about were improvements which had been previously made, or improvements they were then devising or getting up? If so, state which.

58 (Objected to as incompetent.)

Ans. I understood it to be something new that they were getting up.

Ques. 10. Did you hear any suggestions made by either your brother or Mr. Clark in respect of different ways of making a mop, or were different modes *to* construction suggested by both parties and discussed between them at this time?

Ans. I heard suggestions made by both parties respecting the way to make the different pieces; but I cannot tell what each one suggested.

Ques. 11. Were you working continuously about this time for the Townsend Manufacturing Company in the room you refer to?

Ans. I worked every working day from the 3d to the 13th of January. There was about a week then that I did not work, and then again I worked almost continuously for three months, with two short intervals out.

Ques. 12. Who else was present at work in this room when this interview took place? State it you recollect.

Ans. I do not recollect positive.

(Testimony having been read to the witness, he desires to say that the time when he was away from work a week was February, instead of January 13th, as stated. He makes this correction after reference to his diary.)

Ques. 13. Was this the first interview you recollect as having taken place between Clark and Garretson respecting making improvements in mop-heads in the room you have referred to while you were at work?

Ans. It was the first one I remember of.

On being cross-examined the witness said:

Cross Ques. 1. Are you still of opinion that this interview occurred in January, or, after reference to your diary, do you think it took place in February, 1866?

59 Ans. I think it was in January. Cannot be positive as to the time. I did not make any minute of it.

Cross Ques. 2. What time in January was it?

(Objected to as already answered.)

Ans. I do not remember.

Cross Ques. 3. Was it in the forepart or middle part or latter part of January, according to your best recollection?

Ans. My impression is that it was towards the latter part.

Cross Ques. 4. What part of Exhibit Sketch, or the sketch similar to it, did Mr. Clark make, and what part did Mr. Garretson make, to your own knowledge?

Ans. I think Mr. Clark made all of the large sketch. I don't remember seeing Oliver make any of it. The rest of the sketches I do not know who made.

Cross Ques. 5. How far were you from Mr. Clark when he was making the drawing?

Ans. I was various distances—some twenty or twenty-five feet; and sometimes up close to them.

JOEL G. GARRETSON.

Examination taken, reduced to writing, read over to the witness, and by him subscribed and sworn to before me this 23d day of December, 1874.

GEO. J. SICARD, *Examiner.*

CYRUS L. GARRETSON affirmed for complainant:

Ques. 1. Name, age, occupation, and residence?

Ans. Name, Cyrus L. Garretson; age, 35; residence, Buffalo; occupation, clerk for O. S. Garretson.

Ques. 2. Were you in the employ of Townsend Manufacturing Company in January, 1866?

Ans. I was for about three months, beginning January 3d, or thereabouts.

Ques. 3. Did you work continuously while you were there, January and February?

60 Ans. I did.

Ques. 4. Did you ever hear a conversation between O. S. Garretson and Charles B. Clark, at the Townsend Manufactory Company's place of business, in respect to improvements in mop-heads? If so, state when it was, and what took place between them, so far as you recollect.

Ans. I did. It was in January or February, 1866, to the best of my recollection, probably February. They were in the room together where I was at work, talking together in regard to a mop which they had under consideration. I can't give the conversation, any more than that it all related to mops. They were drawing and making sketches of the mop, and I believe completed a sketch of the mop under consideration. I saw the sketch and remembered what the general appearance of it was. The interview lasted something less than half a day. This was the first conversation I remember of their having in regard to mop-heads. Joel Garretson, the parties I have above named, and myself were all that I recollect were present. I think I would recognize that sketch if I should see it at the present time.

(Exhibit Sketch shown witness.)

I believe this to be the same sketch—all the drawings here except some little writing on it. Could not be positive that it is the same sketch.

On being cross-examined the witness said:

X Ques. 1. Did you see the Exhibit Sketch before you were called as a witness; and, if so, did you examine it?

Ans. I did, and I have examined it within the last few days.

C. L. GARRETSON.

Examination taken, reduced to writing, read over to witness, and by him subscribed and sworn before me, this 23d day of December, 1874.

GEORGE J. SICARD, *Examiner.*

61 UNITED STATES OF AMERICA,
Northern District of New York, ss:

I, George J. Sicard, a United States commissioner, appointed by the circuit court of the United States of America in and for the northern district of New York, second circuit, and special examiner in the foregoing entitled cause of Oliver S. Garretson, complainant, vs. Charles B. Clark et al., defendants, pending in the circuit court of the United States for the northern district of New York, duly authorized and empowered to take such evidence as might be adduced by either party before me to be used in said cause, which evidence is hereto prefixed, do hereby certify that on the several days named in the foregoing evidence I was attended, at my office, corner of Main and Swan streets, in Buffalo, in said district, by the counsel for the respective parties to said cause, and by the several witnesses, to wit, Oliver S. Garretson, Joel G. Garretson, and Cyrus L. Garretson; that each of said witnesses, being of sound mind and lawful age, was by me first duly affirmed to testify the truth, the whole truth, and nothing but the truth in said cause, and was then carefully examined, and the
62 said witnesses did thereupon depose as appears in the foregoing depositions, which depositions were reduced to writing in the presence of the said witnesses, and when completed were read over to the said witnesses and signed by them, as and for their respective depositions, in my presence and in the presence of the counsel for the respective parties to this cause.

Complainant's Exhibits Nos. 1, 2, 3, 4, 5, 6, 7, 7½, and 8 were, by consent of counsel, transferred to me by Examiner Gorham. Complainant's Exhibit No. 9, Randlett Model, and Complainant's Exhibit marked "Sketch" were produced and used on said examination before me, as appears by said testimony, and the said exhibits, and also all of the said exhibits so transferred by Examiner Gorham to me as aforesaid, were, by consent of parties, delivered to the respective counsel for the parties hereto, to be by them produced when required for examination, and before the court at the final hearing of said cause.

I further certify that I am not of counsel or attorney to either of the parties to said cause, nor in any way interested in the event thereof.

I further certify that in the taking of said evidence I have complied in all respects with the requirements of the 67th rule in equity, as
63 amended, of the Supreme Court of the United States, and I herewith transmit said evidence under my hand to the clerk of the court in which the said cause is pending.

In testimony whereof I have hereunto set my hand this twelfth day of January, A. D. 1875.

GEO. J. SICARD,
United States Commissioner, Northern District of New York, Special Examiner.

64 COMPLAINANT'S EXHIBIT NO. 1.—GEO. GORMAN, *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Clark & Garretson, dated May 22d, 1866, No. 54860, for improved mop-head.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this nineteenth day of June, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-eighth.

[L. S.] J. M. THACHER,
Acting Commissioner.

No. 54860.

The United States of America to all whom these letters patent shall come:

Whereas Charles B. Clark and O. S. Garretson, of Buffalo, New York, have alleged that they have invented a new and useful improved mop-head, which they state has not been known or used before their application; have made oath that they are citizens of the United States; that they do verily believe that they are the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of their knowledge and belief, been previously known or used; have paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said invention and praying that a patent may be granted for that purpose.

(Here follows diagram marked page 65.)

66 These are therefore to grant, according to law, to the said Clark & Garretson, their heirs, administrators, or assigns, for the term of seventeen years from the twenty-second day of May, one thousand eight hundred and sixty-six, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the words of the said Clark and Garretson, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington this twenty-second day of May, in the year of our Lord one thousand eight hundred and sixty-six, and of the Independence of United States of America the ninetieth.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] T. C. THEAKER,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that we, Charles B. Clark and O. S. Garretson, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful improvement in the construction of mop-heads, and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Fig. 1 is a view in elevation, the collar D, nut K, and a part of the fixed head C, being shown in section.

67 Fig. 2 is a similar view, with all the parts represented in elevation.

Like letters indicate corresponding parts in both figures. It is the object of our invention to simplify the construction of mop-heads, and obviate some of the defects of those in use, having reference to the fact that they are used mainly by persons of the least mechanical skill; and also to reduce their cost; and it consists in the combination of a collar provided with wings, or their equivalent, which carry the movable jaw, and an adjusting nut with which it is connected by means of a flange and lugs, with a threaded shank and fixed cross-head; and also in the manner of connecting the wire frame which constitutes the movable jaw with the arms of the collar before mentioned.

As represented in the drawings, A is a portion of the mop-handle; B is a threaded shank attached to said handle, the latter being secured by a socket in the same; and C a cross-head, being cast as a portion of the shank, and which constitutes the fixed or immovable jaw of the mop-head. The collar D has no internal thread, but slides easily on the shank B. It is provided with two arms *f f*, through which are riveted the two ends of the bent wire E, which forms the movable jaw. Back from the arms project the lips *g g*, which are of a hooked form and embrace the flange *h* of the nut K. This nut is provided with thumb pieces *i i*, or other convenient means of turning it, and is threaded to correspond with the thread of the shank B. By turning the nut it traverses the shank, and moves the collar D (and with it the jaw E) forward and back, according to the direction in which it is turned, the hooked lugs *g g*, and flange *h*, connecting them so that they advance and recede together. The flange *h* fits easily in the lugs to admit of the nut being turned with little friction, and the collar is prevented from turning by the parallel sides of the jaw E, which move in a groove or recess in each end of the jaw C, by which the two jaws are connected. The lugs *g g* may be placed on the nut, and the flange

68 *h* on the collar with the same effect; or a greater number of lugs than two may be employed if desired, or an annular flange on the collar may be extended over and around the flange of the nut; or the nut elongated to extend through the collar, and the two secured together by any ordinary means known to mechanics, all of which would be equivalent both in effect and construction, provided they accomplish the one end essential to the operation of this invention, viz, the connecting of the collar and nut together, so that the latter revolves freely, but both advance and recede as one. The screw of the shank is preferably provided with a left-hand thread, and turning the nut to the right, as usual, moves the collar back, and makes the movable jaw approach the stationary one, and compress the mop-cloth, while a reverse motion loosens it. This arrangement adapts it to unskilled persons, who naturally turn to the right to tighten a mop. The bows *l l*, of the jaw E, are bent so as to terminate in a direction pointing towards the mop, so that the strain to which they are subjected in compressing the cloth holds them in their sockets in the arms *f f*, so that the greater the strain the less liable they are to give way. This arrangement secures several important results. In ordinary mop-heads this joint is the most likely to fail of any part, being usually riv-

eted, and the constant strain tending to wear or break off the rivet-head. By this method very slight riveting only is required, thereby saving labor and cost. It also enables the collar D to be moved closely against the fixed jaw C, in opening the jaws to the proper width, by reason of which the screw shank may be shortened materially, rendering the mop-head lighter, more compact and symmetrical, than is attained by the ordinary mode of construction.

It is a common defect of mop-heads to be constructed with a swivel or pivot, on which one or the other of the jaws turns to loosen or tighten the cloth. This swivel being kept constantly damp, soon rusts so much as to become useless, and the mop-head is in consequence discarded. Our
69 device obviates this defect, and enables us to make the shank and jaw C of a single piece, securing all the strength of metal at their junction required.

What we claim as our invention and desire to secure by letters patent is, connecting the nut K with the collar which carries the movable jaw E E by means of the lugs *g g*, or their equivalent, in combination with the threaded shank of the jaw C, arranged and operating substantially as set forth.

We also claim connecting the movable jaw E E with the collar D by means of the bows *l l*, constructed and operating substantially in the manner and for the purposes specified.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

C. B. CLARK.
O. S. GARRETSON.

JAY HYATT,
LYMAN P. PERKINS,
Witnesses.

(Endorsed:) Filed Jan'y 21, 1875.

COMPLAINANT'S EXHIBIT No. 2.—G. G., *Examiner.*

Territorial assignment of patent.

Whereas Oliver S. Garretson and Charles B. Clark did obtain letters patent of the United States for an improved mop-head, which letters patent bear date the 22d day of May, 1866, and are numbered 54860;

And whereas Oliver S. Garretson, of the city of Buffalo, is desirous of acquiring an interest therein;

Now this indenture witnesseth, that for and in consideration of the sum of two dollars, to me in hand paid, the receipt whereof is hereby acknowledged, I have assigned, sold, and set over, and do hereby assign, sell, and set over unto the said Oliver S. Garretson, all the right, title, and interest which I have in the said invention, as secured to them by said letters patent, for, to, and in the United States of America, being the in-
70 terest in said letters patent assigned to me by Charles B. Clark on the seventeenth day of February, 1869.

The same to be held and enjoyed by the said Oliver S. Garretson, for his own use and behoof, and for the use and behoof of his legal repre-

sentatives, to the full end and term for which the said letters patent are granted, as fully and entirely as the same would have been held and enjoyed by me if this assignment and sale had not been made.

In testimony whereof I have hereunto set my hand and affixed my seal this eleventh day of November, 1871.

JOHN D. SHEPARD. [SEAL.]

Sealed and delivered in presence of—
CHAS. G. SHEPARD.

Received for record May 4, 1874, and recorded in liber B 18, page 131, of Transfers of Patents.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

[SEAL.] J. M. THACHER,
Acting Commissioner.

(Endorsed:) Filed Jan'y 21, 1875.

COMPLAINANT'S EXHIBIT No. 3.—G. G., *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted O. S. Garretson, dated August 30th, 1867, No. 67643, for "Improved Mop-head."

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this nineteenth day of June, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-eighth.

[L. S.] J. M. THACHER,
Acting Commissioner.

71 No. 67643.

The United States of America to all to whom these letters patent shall come:

Whereas O. S. Garretson, of Cincinnati, Ohio, has alleged that he has invented a new and useful improved mop-head, which he states has not been known or used before such invention; has made affirmation that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are therefore to grant, according to law, to the said O. S. Garretson, his heirs, administrators, or assigns, for the term of seventeen years from the thirteenth day of August, one thousand eight hundred and sixty-seven, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description

whereof is given in the schedule hereunto annexed and made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this thirteenth day of August, in the year of our Lord one thousand eight hundred and sixty-seven, and of the Independence of the United States of America the ninety-second.

O. H. BROWNING,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] T. C. THEAKER,
Commissioner of Patents.

(Here follows diagram marked page 72.)

73 UNITED STATES PATENT OFFICE.

Oliver S. Garretson, of Cincinnati, Ohio. Letters patent No. 67643, dated August 13, 1887. Improved mop-head.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, O. S. Garretson, of the city of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful improvement in the construction of mop-heads; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the head, with a part of the handle attached, the parts being put together complete.

Figure 2 is an elevation of the same, part of the nut and part of the collar of the loose jaw being removed to show the manner in which the flange of the nut enters the collar, and, by being rotated, acts on the screw of the shank or handle, and makes the loose jaw recede from or approach the fixed jaw or cross-head; also the manner of connecting the parts of the loose jaw together.

Figure 3 is a perspective view of part of that part of the loose jaw that forms the collar broken in two to show the recess in which the flange of the nut plays, and the recess designed to receive and retain the smaller parts of the same, or that part that may be formed of wire, as here represented, with the holes by which with rivets the parts are secured together.

Figure 4 is the nut shown in perspective.

Like letters indicate corresponding parts of all the figures.

My improvement in mop-heads chiefly consist in constructing that part of the loose jaw that forms the collar in two parts or halves, with the inner surfaces properly grooved to receive and retain the flange or wings of the nut, and to allow it to have a free rotary motion, by which
74 means the parts with the recesses and rivet-holes may be cast complete, requiring no drilling or reaming in putting together.

As represented in Fig. 1, *a a* is the fixed jaw or cross-head, and is cast hollow to receive the handle *h*. In Fig. 2 the loose jaw is marked *b b c c*; and here one part of it marked *c c* is removed, the better to show the recess in which the flange of the nut *d d* plays. Part of the nut is also removed to show how the thread of the screw on its inner surface acts on the screw on the shank or handle *h*, and the flange is retained in the recess in the loose jaw, when, by rotating the nut by the thumb-pieces *g g*, Fig. 4, the loose jaw *b b c c* must recede from or approach the fixed jaw, for the purpose of receiving and retaining the mop. Fig. 4 is the nut, shown in perspective, with one thread of a screw on its inner surface, to match the screw on the shank or handle *h*, with its thumb-pieces *g g*, by which it is rotated. Part of the flange on its outer surface is also lacking, better to adapt it to be moulded and cast without coring.

The important advantage gained by my construction of the mop-head is that, by constructing that part of the loose jaw that forms the collar for the nut in two parts or halves, it, with its recesses and rivet-holes, may be cast complete, and will require no drilling or reaming in putting together, a great saving of labor in constructing, and when done forms a neat, compact, and durable article.

The operation or manner of using it is to turn the nut by its thumb-pieces *g g*, Fig. 4, and the loose jaw recedes from the fixed jaw or cross-head, and the mop may be inserted. Turning the nut in an opposite direction brings the loose jaw and the cross-head near together, and the mop is held firmly in position.

What I claim as my invention, and desire to secure by letters patent, is—

Making the collar of the loose jaw in two parts, so that the nut *d d* may be placed between them; and, when connected together, the collar surrounds the nut and retains it in position for the purpose above set forth.

In testimony of which invention I hereunto set my hand.

O. S. GARRETSON.

Witnesses:

JOS. H. WOODRUFF.

JOHN G. GARRETSON.

(*Enclosed*:) Filed Jan'y 21, 1875.

75 Circuit court of the United States, northern district of New York.

OLIVER S. GARRETTSON
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK.

Testimony taken by and before R. E. Stilwell, esq., on part of the defendants, who is hereby agreed upon by the parties complainant and defendant as special examiner, to take proofs and testimony herein, in the southern district of New York, under and in pursuance to the 67th rule of the Supreme Court of the United States, as amended, in equity.

NEW YORK, *Tuesday, December 1st*, 1874.

Present: J. Van Santvoord, esq., counsel for defendants, and G. M. Plympton, esq., counsel for complainant.

Defendants' counsel offers in evidence a certified copy of letters patent of

the United States, No. 13812, granted November 20, 1855, to Alexander Barnes, for improvement in mop-heads, and the same is marked "Defendants' Barnes' Exhibit, R. E. S., Ex'r."

Also a certified copy of like letters patent, granted May 30, 1865, to A. W. Park, for an improved tool, No. 48027, and the same is marked "Def'ts' Park Exhibit, R. E. S., Ex'r."

Also, like letters patent, granted July 10th, 1866, to Byron Boardman, No. 56166, marked "Def'ts' Boardman Exhibit, R. E. S., Ex'r."

Also, certified copy of like letters patent, granted Solyman Merrick, Aug. 15, 1848, No. 5707, for improvement in screw-wrenches, and the same is marked "Def'ts' Exhibit Merrick, R. E. S. Ex'r."

76 Also, a certified copy from the bound volumes of the library of the United States Patent Office of the specifications and drawings of English letter patents No. 45, dated Oct. 1st, 1852, to C. W. R. Rickards, for tongs for screwing pipes and screws, marked "Def'ts' Rickards Exhibit, R. E. S., Ex'r."

Also, a certified copy of American letters patent, No. 10237, granted November 15, 1853, to T. Randlett, for improvement in mop-heads, and the same is marked "Def'ts' Randlett Exhibit, R. E. S., Ex'r."

Also, a certified copy of like letters patent, No. 23751, for screw-wrench, granted April 26th, 1859, to Albert D. Briggs, and the same is marked "Def'ts' Exhibit Briggs, R. E. S., Ex'r."

Also, a screw, wrench, marked "A. D. Briggs, Patented April 28th, 1859," and also marked "Def'ts' Exhibit Model Briggs, R. E. S. Ex'r."

Also, certified copy of letters patent, granted May 9, 1865, No. 47642, to Nelson Homes, for improved mop-head, and the same is marked "Def'ts' Homes Exhibit, R. E. S., Ex'r."

Also, certified copy of like letters patent, No. 50137, granted Sept. 26, 1865, to C. Karr, for mop-head, and the same is marked "Def'ts' Karr Exhibit, R. E. S., Ex'r."

Also, certified copy of reissue letters patent, No. 3682, dated Oct. 19, 1869, to Luke Taylor, for an improved mop-head, being a reissue of original letters patent dated February 15, 1859, and the same is marked "Def'ts' Taylor Exhibit, R. E. S., Ex'r."

Also, certified copy of like letters patent, No. 64683, dated May 14, 1867, to Mason & Messenger, for improved mop-head, and the same is marked "Def'ts' Mason & Messenger Exhibit, R. E. S., Ex'r."

Also, a certified copy of file wrapper, contents, and drawing of Gray & Adams patent for lifting and pressing screws, No. 58342, dated Sept. 25, 1866, and the same is marked "Def'ts' Exhibit Gray & Adams, R. E. S., Ex'r."

Also, model marked "Gray & Adams Model, R. E. S., Ex'r."

Also, certified copy of like letters patent, No. 82383, Sept. 22, 1868, for mop-head, to Clark & Ferguson, and the same is marked "Def'ts' Exhibit Clark & Ferguson, R. E. S., Ex'r."

77 Also certified copies of two patents to C. B. Clark for mop-head, Nos. 128711 and 145397, July 9, 1872, and Dec. 9, 1873, and the same are marked "Def'ts' Exhibits Clark Patents, R. E. S., Ex'r."

CHARLES B. CLARK, called and sworn as a witness on part of defendants, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Charles B. Clark. I am 42 years of age; residence, Buffalo, N. Y.; I am a manufacturer of builders' hardware.

Q. 2. Are you one of the defendants in this action?

A. I am.

Q. 3. Are you the Charles B. Clark named as one of the patentees in the patent 54860, and which is one of the patents on which this suit is brought?

A. I am.

Q. 4. State whether or not the improvements in the construction of mop-heads, described in said patent, was the joint invention of yourself and O. S. Garretson, or if any part thereof was the joint invention of yourself and Garretson.

(Objected to as a matter of record and incompetent.)

A. The said improvements in the mop-head referred to were not the joint invention of O. S. Garretson and myself, nor was any part of the said improvements the joint invention of O. S. Garretson and myself.

Q. 5. State what portion, if any, of such improvements, described in said patent, was invented by Mr. Garretson, and what portion, if any, by yourself.

A. That portion of the mop which constitutes the movable jaw, constructed with bent ends in the form of bows, the extreme ends of which are riveted in the ears of the collar of the mop. These bows enter the collar from the outer side, or that side next to the handle of the mop, so that when the mop is tightened for use the ends of the moveable jaw are held more firmly within the collar. The portion I have just described was invented by O. S. Garretson. My invention or improvement consisted in combining the collar, which carries the movable jaw, with a thumb-nut, the thumb-nut being placed on the side next the handle of the mop, and being rotated over the threaded shank of the main cross-head of the mop. It also consisted in forming the main cross-head with the threaded hollow shank, said cross-head being grooved, and with the hollow shank cast entire or in one piece. The general and entire construction of the mop, except the moveable jaw with carved ends, was my own.

78 Q. 6. Please look at the claims of said patent, and state whose invention the construction of the combination specified in the first claim is, and whose invention the construction and combination described in the second claim is?

(Objected to as improper.)

A. The first claim in the letters patent, describing the combination there specified, is my own. The second claim, as specified in said letters patent, is that of O. S. Garretson.

Q. 7. What business were you engaged in when you made that invention described in letters patent 54860, and with whom, and where?

A. I was mainly engaged in manufacturing window-sash locks; I was a member of the firm of Clark & Co., and at that time I was located in the city of Buffalo, N. Y. The company then consisted of James B. Shaw, John K. Clark, both of Mount Pleasant, Iowa, and myself.

Q. 8. Explain how you came to be associated with Mr. Garretson in applying for this patent 54860?

(Objected to as immaterial.)

A. Mr. O. S. Garretson and myself at that time had a joint interest in

some patent blindings, patented by O. S. Garretson; this was our business connection.

Q. 9. How came you and Mr. Garretson to make application together for one patent for your distinct individual inventions?

(Objected to as immaterial.)

A. Because we were inventors of the mop, and I supposed we had a right to apply for a patent together on the same.

Q. 10. Do you mean that you were joint inventors of the mop, or how?

A. I do not mean that we were joint inventors of each particular part, but that, taken together, it constituted the entire construction of the same.

Q. 11. What do you mean by "joint inventors of each particular part"—were you joint inventors of any part?

(Objected to as leading.)

A. I have reference to each particular claim; we were not joint inventors of any particular part.

Q. 12. Were you witness on the part of the defendants in a suit in the circuit court, U. S., for the northern district of New York, in which Luke Taylor was complainant and Oliver S., Joel G., and Albert Garretson and John D. Shepard were defendants, brought on letters patent of said Luke Taylor, for a mop-head?

(Objected to as irrelevant.)

79 A. I was.

Q. 13. Please look at the printed record herewith shown to you, entitled in that suit, and particularly the deposition of Charles B. Clark contained therein on pages 10, 11, and 12, and state if that is, according to the best of your knowledge and belief, a copy of the deposition made by you in that suit.

(Objected to as irrelevant; and a motion will be made at the final hearing to strike out any reference to the testimony by the defendant in the case referred to.)

A. It is.

The copy deposition referred to in the last answer is offered in evidence by defendants' counsel and marked "Def'ts' Exhibit Clark Deposition R. E. S., Ex'r."

(Same objection.)

Q. 14. In said deposition you state: "The reason I so distinctly recollect this mop-head is, it was recalled to my mind some five years ago, and the device being in my mind in inventing a mop at the time, I was a joint inventor. Mr. Garretson was with me. I improved the thumb-nut in the invention I speak of." To what joint invention did you refer in which Mr. Garretson was with you, as you said in said quotation?

(Same objection, and as leading.)

A. I referred to the invention of the mop-head on which letters patent were issued, dated May 22, 1866, to O. S. Garretson and myself.

Q. 15. How came you in said deposition to state, "I was a joint inventor; Mr. Garretson was with me?"

(Same objection, and as improper.)

A. Because the mop-head was constructed by O. S. Garretson and myself; we together applied for a patent, and the patent was issued to O. S. Garretson and myself. I might state that the word "joint invention" had

no special significance, more than that I supposed at that time that the patent belonged to us together, having been issued by the Patent Office to us.

Q. 16. To what mop-head do you refer in said quotation by the words, "the reason I so distinctly recollect the mop-head is?"

(Same objection.)

A. I referred to the exhibit which was marked "F" in that case, I think, which is as shown me on my testimony.

80 Q. 17. Can you now produce that exhibit? If you can, please do so.

(Same objection.)

A. I cannot now produce that identical exhibit, but can produce an exhibit similar in form to that one.

Q. 18. Please produce the same.

A. I do produce it.

(Defendants' counsel offers a mop-head produced by witness in evidence, and the same is marked "Def'ts' Exhibit F; R. E. S., Ex'r.")

Q. 19. What does this Exhibit F represent?

A. This Exhibit F represents a mop-head having a threaded shank riveted to the main cross-head, which is grooved on its outer side and notched at each end to serve as guides for the binding wire, the ends of which, passing through and above the said notches, are riveted to a collar which works loosely over the threaded shank. This binding wire or movable jaw is actuated by a thumb-nut, which works upon the threaded shank and between the loose collar and the main cross-piece of the mop-head. The threaded shank is constructed of wrought iron, the lower portion of which is divided or forked shape, riveted into the main cross-piece. The upper portion of the threaded shank is attached to the wooden handle of the mop-head. The mop-cloth is clamped between the movable jaw and main cross-head, by operating the moveable jaw by the thumb-nut upon the shank and under the loose collar.

Adjourned to 2d inst., at 11 a. m.

WEDNESDAY, *Dec.* 2, 1874.

Present: Counsel as before.

Continuation of the examination of Charles B. Clark.

Witness states: On reviewing my testimony in answer to questions 9, 10, and 15, I wish to correct the same, as they do not correctly express my meaning.

In answer to interrogatory 9: Because we were in business together in the articles before mentioned, and each having invented a different part of the mop, I thought we could put them together and apply for a patent on the same together; this is what I meant to say and desire to say.

In answer to interrogatory 10: I meant to say, and now desire to say, I do not mean that we were joint inventors of any part of the

81 mop, but that each of us invented a particular part, so I thought that we could put the two parts together so as to make a mop, and apply for a patent *together* on the same together.

In answer to interrogatory 15: What I meant to say, and now desire to say: Because each of us constructed a different part of the mop-head, I thought by putting them together we could apply for a patent together, and have it issued to us jointly.

(Counsel for the complainant objects to the foregoing corrections, and did so object before they were made, since an interval of twenty hours has elapsed since the original testimony was given, and the corrections should have been made when the witness's answer was read over to him before the adjournment.)

Q. 20. Were your answers read by you previous to the adjournment of last evening?

A. They were not.

Q. 21. Were all of your answers read over to you prior to the adjournment of last evening, and do you recollect whether or not these answers to which you refer in your corrections were read over to you before the adjournment?

A. I do not recollect distinctly that all the answers were read over; I do not recollect distinctly as to these answers I refer to.

(Counsel for the complainant requests the commissioner to state upon the record whether or not the answers of the witness were read over to him before the adjournment yesterday afternoon.

The commissioner states that he thinks the answers referred to by counsel were read to witness, but he is not positive.)

Q. 22. Of what mop-head is Exhibit F a sample, and state by whom and when exhibit was made?

A. The mop-head Exhibit F is a sample of a mop-head with which I was acquainted in or before the year 1850. The Exhibit F now before me was made at the works of Clark & Co., by my directions, during the latter part of November, 1874.

Q. 23. What is the history of the mop-head with which you were acquainted in or before the year 1850; state how you became acquainted with it?

A. My father purchased one or more of the said mop-heads; one was retained for use in the family, and this circumstance leads me to remember this particular kind of mop-head, namely, Exhibit F.

Q. 24. Was that suit of Taylor against Garretson decided on final hearing, and, if so, state where such decision is found?

(Objected to as incompetent, and as a matter of record.)

82 A. I think it was decided. I think it will be found in the 9th volume of Blatchford's Reports, page 156.

Q. 25. State whether the mop-head I now show you is made in accordance with complainant's patent 54860.

A. According to my best understanding it is.

(Mop-head shown witness marked "Def'ts' Exhibit G; R. E. S., Ex'r.")

Q. 26. State whether the mop-head I now show you is of a style manufactured by the complainant, and whether it is claimed by the complainant to be in accordance with his letters patent.

A. According to my best knowledge and belief it is the mop-head now made by complainant, and is claimed by the complainant to be in accordance with his letters patent.

(Mop-head referred to by witness offered in evidence and marked "Def'ts' Ex. H; R. E. S., Ex'r.")

Cross-examination by GILBERT M. PLYMPTON, Esq.:

X Q. 27. When did you and Mr. Garretson invent the mop-head, the patent for which is the subject-matter of this suit?

A. I might answer that though we did not invent the mop-head together, but each invented a separate part of the same, in the latter part of the year 1865 or the early part of the year 1866.

X Q. 28. When and where did you invent your separate part of the mop-head?

A. I invented my separate part of the mop-head, the latter part of 1865, or the forepart of 1866, and in the city of Buffalo, N. Y.

X Q. 29. In what place in the city of Buffalo did you invent your part of the mop-head?

A. In buildings occupied by, I think, the Townsend Mfg. Co., situated on Main street—I forget the number—the lower part of the street.

X Q. 30. In what part or room in this building did you invent your part of the mop-head?

A. On the first floor, rear part of the building—I mean the floor which is entered from the street; there might have been a basement to the building.

X Q. 31. By whom was the apartment occupied you refer to, at the time you invented your part of the mop-head?

A. It was occupied by the Townsend Mfg. Co.

X Q. 32. Who was present when you invented your part of the mop-head?

83 A. One James Karr and one Mr. Strong; I do not remember of any one else beside myself.

X Q. 33. How many days were you engaged in making this invention from its inception to completion?

A. As I understand invention, it was a very short time, less than a day.

X Q. 34. Who or what induced you to make your part of the invention on this mop-head?

A. I was induced by no one; and suppose I was governed by inducements that were common to inventors; my inducements generally have been to make money by my inventions, and I think that was my inducement at that time.

X Q. 35. What particular mop-head, if any, did you seek to improve, and how did you go about it; state fully and particularly all the circumstances attending your proceedings in relation to this invention by you?

A. I sought to improve the mop-head of no one in particular; I went about it by conceiving the design, and directly I placed it in an understandable manner.

X Q. 36. Who, if anybody, did you consult during the time you made this invention?

A. I consulted no one as to the invention.

X Q. 37. What particular point, if any, did you seek to improve?

A. I sought to improve no particular point; but only to produce a good mop-head.

X Q. 38. Do you mean by your last answer that your invention was directed to an entire mop-head?

A. I do.

X Q. 39. In making this invention, did you make sketches or drawings?

A. I made pencil sketches of the mop.

X Q. 40. Where are those sketches now; and if you have them will you produce them?

A. I cannot say where they are now.

X Q. 41. How many sketches were there, and what did they represent?

A. I remember now of making but one rude sketch in pencil; it represented the invention as near as I can remember substantially.

X Q. 42. Do you mean by your last answer that the sketch represented substantially the compl't's mop entire, as shown in Ex. G?

A. It represented substantially the compl't's mop, Ex. G, except the binding wire or moveable jaw of said exhibit.

X Q. 43. Are you positive that the sketch referred to by you did not represent the binding wire?

A. I am quite positive that it did not represent the binding wire as sketched by myself.

X Q. 44. Why did you omit from the sketch the binding wire?

84 A. I did not omit from the sketch a binding wire; I put an ordinary binding wire in, similar in shape to those commonly used at that time.

X Q. 45. Was this drawing made on a board with a bit of chalk; if not, what was it made on, and in what particular room or place was it made?

A. I forget upon what substance or surface it was made; my impression is that it was made on some kind of paper, and with lead pencil; the room in which it was made was one above the first story; what particular story I cannot now state, but it was made in the front part of the building.

X Q. 46. Who, if any person, was present when you made the sketch?

A. Oliver S. Garretson was present, and I believe one Albert Storer.

X Q. 47. How did Mr. Garretson happen to be present when you made the sketch; was he present accidental or at your solicitation?

A. Mr. Garretson at that time was engaged in working upon and superintending the completion of models for certain blind hinges for the Patent Office, as near as I can remember; he was not present at that particular time at my solicitation.

X Q. 48. Was the sketch you allude to made entirely by you without suggestion from Mr. Garretson concerning the mop-head you were constructing on paper?

A. I do not remember of any suggestions made by Mr. Garretson at first concerning the sketch until I had drawn the sketch.

X Q. 49. After you had drawn the sketch, what suggestion, if any, did Mr. Garretson make?

A. He made a suggestion regarding the movable jaw or binding wire of the mop in the sketch.

X Q. 50. What was that suggestion?

A. It was substantially that he could alter the shape of the binding wire and also suggested the making of it shaped differently from that shown in my sketch; the suggestion related to the peculiar form of the ends of the binding wire, whereby they were curved in bow-shape, and caused to enter the sliding collar from the upper side, or that side nearest the wooden handle of the mop, and were fastened by riveting the same underneath the sliding collar.

X Q. 51. Did you adopt Mr. Garretson's suggestion?

A. Mr. Garretson's suggestion was adopted.

X Q. 52. Look at the certified copy of letters patent, Clark & Garretson, on which this suit is brought, and state if the drawing attached thereto represents substantially the binding wire, as suggested by Mr. Garretson.

A. I find on referring to the drawings of the certified copy of said letters patent, that the binding wire is substantially the same as that suggested by Mr. Garretson.

85 X Q. 53. What other suggestion, if any, did Mr. Garretson make in the mop-head represented in the patent in suit, which I now hand you?

A. He made no other suggestion that I remember of.

X Q. 54. State particularly whether Mr. Garretson made any other suggestion than that referring to the binding wire of the mop shown in complainant's patent.

A. He made no other suggestion affecting the nature of my invention.

X Q. 55. State positively whether or not Mr. Garretson made any suggestion respecting the construction of the mop now shown in the letters patent of the complainant, other than that relating to the binding wire.

A. He made no other suggestion except that which related to the construction of the binding wire.

X Q. 56. Having heard your last answer read to you, do you wish to strike out or modify any part of the same?

A. I do not.

X Q. 57. How did you come to incorporate in your mop Mr. Garretson's suggestions of binder?

A. Because I then thought that it might be preferable to the one I had sketched.

X Q. 58. What arrangement did you make with Mr. Garretson concerning his suggestion?

A. We agreed to put the two together, that is, his invention and my invention, and also together to apply for a patent on the mop.

X Q. 59. What advantages, if any, were derived from Mr. Garretson's binding wire, and did his wire materially affect the constructing, working, or cost of the entire mop-head?

A. I should say the advantage arising from the construction of Garretson's binding wire is that it shortens the main shank B of the mop in a slight degree, but it does not lessen the length of the binding wire, but rather increases it. The cost of the mop-head would hardly be affected by this arrangement. The bows being bent in this form, they are better preserved from getting loose from the sliding collar when the mop is in use.

X Q. 60. Did Mr. Garretson suggest these advantages at the time he suggested the binder?

A. He suggested the advantage only of making the binding wire bow-shaped, for the purpose of making the mop more compact, and perhaps of fastening the bows or binding wire more securely.

X Q. 61. Did the adoption of Mr. Garretson's wire binding result in shortening the main shank of your mop, make it more compact, and add to the security of the bows?

A. This construction of the bows tended to make the shank B slightly shorter, but did not result in holding the bows more firmly, as a general thing, because the difficulty of riveting the wire was increased.

86 X Q. 62. Did the adoption of Garretson's wire make your mop-head more compact?

A. But slightly so; in one sense it did.

Adjourned to 3d inst., at 11 a. m.

THURSDAY, *Dec.* 3, 1874.

Present: Counsel as before.

Continuation of the examination of Charles B. Clark.

Redirect:

(A mop-head is shown witness.)

Q. 63. Where and of whom did you obtain this mop-head?

A. Of Mr. E. L. Ferguson, of the city of Buffalo, N. Y.

(Mop-head offered in evidence, and marked "Def'ts' Exhibit I; R. E. S., Ex'r.")

CHARLES B. CLARK.

Subscribed & sworn to before me this 3rd December, 1874.

R. E. STILLWELL, *Ex'r, &c.*

A. FABER DU FAUR, called and sworn as a witness on part of defendants, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. A. Faber du Faur; I am 49 years of age; I reside at Newark, N. J.; office, 90 Broadway, N. Y.; I am an engineer and metallurgist.

Q. 2. Are you familiar with mechanical principles and their application to machinery; and if so, state how long you have made them a study?

A. I am familiar with mechanical principles and their application to machinery, and I have made them a study during the greater part of my life.

Q. 3. Have you examined carefully the complainant's patents No. 54860 and 67643, set forth in the bill; and, if so, state whether or not you clearly understand the devices and inventions described and patented in those patents?

A. I have carefully examined certified copies of the patents referred to, and I believe I understand the devices and invention described and claimed therein.

Q. 4. What inventions do you observe to be described and claimed in the letters patent 54860?

A. The invention described in the patent 54860 belongs to that class of mop-heads, where one of the jaws is rigidly connected to the handle, while the other jaw is connected to a cross-head surrounding the handle
87 and prevented from turning by the jaw, and where longitudinal motion is imparted to the cross-head by means of a screw. The male thread of the screw in this case is firmly connected in the handle, and the female thread is in a nut with thumb-ears, this nut being so connected with the cross-head that the nut may turn freely while the nut and cross-head share any longitudinal motion together.

The method of connecting the nut and cross-head shown in the drawing, consists of hooked lugs passing over a flange on the nut. The inventor, however, does not confine himself to this specific method of connecting

the nut and cross-head, but mentions different other methods which may be employed, which would be equivalent in effect and in construction, provided they accomplished the one end essential to the operation of this invention, to wit, the connecting of the collar and nut together, so that the latter revolves freely, but both advance and recede as one. The specification also describes a certain manner of connecting the wire frame which constitutes the movable jaw with the cross-head. This cross-head has two arms, to which the wires of the movable jaw are riveted. The wires are bent so as to terminate in a direction pointing towards the mop. The object of this arrangement is to hold the wires in place with only very slight riveting, and to enable the cross-head to be moved more closely against the fixed jaw.

In the first claim I find specified the following elements: First, a nut, K; second, a collar, the same part which I have called a cross-head in my description; third, a movable jaw, E E; fourth, lugs, *g g*, or their equivalents, for connecting the nut with the cross-head, so that the nut revolves freely, but both nut and cross-head advance and recede as one; fifth, the threaded shank of the jaw C.

In the second claim, I find specified the following elements: First, the movable jaw E E; second, the collar D, and the third, the bows L L; these bows, as described in the specification, and shown in the drawing, are bent so that their ends point toward the jaws, and are inserted into the collar or cross-head in a direction parallel, or nearly parallel, to the axis of the shank.

Q. 5. Have you read and examined the letters patent marked "Def'ts' Park Ex.," "Def'ts' Boardman Ex.," "Def'ts' Merrick Ex.," "Def'ts' Randlett Ex.," "Def'ts' Exhibit Briggs," and also the screw wrench marked "Def'ts' Ex. Model Briggs," and "Def'ts' Homes Ex.," and "Def'ts' Karr Ex.," and "Def'ts' Taylor Ex.," and have you examined the claim and drawing in the Patent Office report of "Def'ts' Barnes Ex.," and do you understand the several constructions shown and described in said exhibits, respectively?

A. I have examined the exhibits referred to, and I believe I understand the inventions described therein.

88 Q. 6. State whether or not you find in any of def'ts' said exhibits, and in which, if in any of them, the construction or combination of a collar connected with a movable jaw, having a nut connected with such collar, the nut running on a screw shank of an opposing jaw, and give your reason for the opinon that you may express.

A. I find such a combination in Park Exhibit. The collar *a*, *b*, *g* surrounds the screws and has longitudinal motion, but is prevented from turning. The nut I is inserted into the collar in such a manner that it can revolve freely, but so that both advance and recede as one; *f* is the threaded shank to which the jaw E F is connected. F' B is the movable jaw connected with the collar.

I find in Exhibit Boardman the same combination, arranged in substantially the same manner as in the previous arrangement. I have to remark, however, that in both cases the handle is connected with a collar, which, however, does not alter the character of the mechanical device; if in Exhibit Parks the jaw E F is held fast, then by turning the nut the jaw F B becomes movable, and the same in Exhibit Boardman.

In Exhibit Merrick I find the same combination, G being the nut; the collar is in B, connected through the piece H and the lug O with the nut G in such a manner that the nut can revolve freely, while the nut and collar advance and recede as one. E is the screw shank connected through C with an opposing jaw, *a*, *b*; *c d* is the movable jaw operated through and advancing and receding with the nut G.

I find the same combination in Exhibit Briggs and Exhibit Model Briggs. F is the nut, and E is the movable or sliding jaw, which engages with the screw-nut F. The jaw E and the extended part of it surround the shank and form a collar. The collar of the movable jaw is attached to the nut F by means of a lug engaging in a groove of the nut in such a manner that the nut can revolve freely, but that the nut and collar, with the jaw, advance and recede together. C is the opposing jaw connected with the shank. G is the part of the nut which is taken hold of in operating it.

I find a similar combination in Exhibit Randlett. C forms a kind of a nut, but it has not a regular screw-thread, and the threaded shank only consists of one abutment against which the spiral surface of the piece C acts.

The movable jaw D is connected with the collar E on the shank A.

By turning the piece C in the proper direction, the spiral or screw-like surface acts against the abutment or end surface of *d*, so that C E and the jaw D recede together, closing the jaw D against the opposing jaw B, which through the socket *a* is connected with the shank A. This screw-like arrangement only gives positive motion in one direction.

In Exhibit Taylor, I find a collar, C, surrounding the handle
89 and forming on the outside a screw shank. This collar, by means of its outer thread, is connected with the nut D. The nut runs on the screw shank, either only in a longitudinal direction, or, by only holding the thumb ears B, it can be revolved around the shank, and advance or recede at the same time.

The nut has the jaw *d* attached to it, and runs against the opposing jaw *c*, with which the screw shank is connected.

Q. 7. What difference, if any, is there between the office or function of the two jaws of the mop-head shown in complainant's patent 54860, and the office or function of the two jaws of a wrench?

A. The office or function is substantially similar, so far as holding or confining something between them is concerned.

Q. 8. You have said that you find in Exhibits Park Patent, Boardman Patent, Merrick Patent, Briggs Patent and Model, the devices of a collar connected with a movable jaw, having a nut connected with such collar, the nut running on the screw shank of an opposing jaw. Please state if such devices perform in the mop-head shown in complainant's patent 54860 any other or different office or function from their ordinary or usual office or function in the exhibits above-named in this question, and give your reasons for any opinion you may express.

A. They do not perform any other office, namely, the opening and closing of the two jaws, so as to hold or release the objects placed between them.

Q. 9. Please answer the same question in regard to the manner of operating the said devices in the said mop-head as compared with their man-

ner of operation in said exhibits, and state if there is any difference in them with respect to their manner of operation?

A. The manner of operating is substantially the same, the jaws being operated by holding the handle and turning the nut.

Q. 10. Considering the state of the art of operating a movable jaw by means of a connected collar and nut on the screw shank of an opposing or stationary jaw to have been, prior to Taylor's patent of 1859, such as shown in the Briggs patent of 1859, and the Merrick patent of 1848, was any addition made to the art in or by the arrangement for operating the movable jaw as described in complainant's patent 54860?

A. There was no addition made.

Adjourned to Dec. 4th inst., at 10 a. m.

90 FRIDAY, *December* 4th, 1874.

Present: Counsel as before.

Continuation of the examination of A. Faber du Faur.

Q. 11. State whether or not the several inventions which form the subject of complainant's patent 54860, and which are specified in the two claims of that patent, are dependent upon or independent of each other in their respective functions or operations; please give your reasons for any opinion you may express on that point.

(Objected to as asking the witness to construe the patent, and drawing legal conclusions therefrom.)

A. They are independent of each other; the arrangement specified in the second claim may be applied to any mop-head in which the wires of the movable jaw are connected to a cross-bar, independently of the manner in which the longitudinal motion of the cross-head may be effected, whether by the combination of the elements recited in the first claim or by any other means.

Q. 12. What, if anything, in any of the defendants' exhibits referred to by you, in answer to question 6, is analogous in construction and operation to what are called "bows" in complainant's patent 54860?

A. I find analogous to the bows *l*, in complainant's patent 54860, the curved wires of the movable jaw in Randlett Exhibit, Karr Exhibit, Homes Exhibit, and Taylor Exhibit, in all of which the wires are curved round so as to be fastened to the cross-head, through which the jaw is operated.

Q. 13. State whether or not you find in patents Park Ex., Boardman Ex., Merrick Ex., Briggs Ex., and Model Briggs Ex., means of connecting the movable jaw with the part in contact with the nut, and if you do, please compare such means of connection with the movable jaw and nut, and connections in complainant's patent 54860, and state how you find the former to compare with the latter in respect to similarity or dissimilarity.

A. I find such means of connection in the patents referred to. In all of the patents referred to, the jaw and connection form one piece; otherwise the arrangements are substantially similar.

In Exhibit Park there are two connecting pieces, *d d*, corresponding to *e e* in complainant's patent, and similar connecting pieces, B B, are found in Exhibit Boardman.

In Exhibit Merrick there is but one connecting piece, H, corresponding to E in complainant's patent.

In Exhibit Briggs, also, there is but one connecting piece, as clearly shown in Ex. Model Briggs.

91 Q. 14. Please state whether or not you made the translation marked "Exhibit Prechtl 1," and whether the same is a correct translation of the original."

A. I made it, and consider it a correct translation of the original before me.

Q. 15. State whether or not you have examined the translation marked "Ex. Prechtl, 2," and compared the same with the German text, also so marked, and whether or not the same is a correct translation thereof.

A. I have examined and made the comparison, and I consider the translation to be correct.

Q. 16. Compare the invention described in complainant's patent 54860, and specified in the first claim thereof, with the constructions described and shown in defendants' Exhibit Prechtl 1, with respect to similarity or dissimilarity of the construction and operation, and state the result of your comparison.

A. I find in Exhibit Prechtl 1, in Figure 1, a nut forming part of the handle, and connected with a collar, *a*, carrying the jaw *b*, which is immovable if the jaw *a* is held fast. The nut is secured to the collar by having the nut elongated to extend through the collar, and then secured by a ring with a set screw, which is one of the ordinary means known to mechanics for securing or confining a collar, and which arrangement, as stated in the specification of complainant's patent, is a mechanical equivalent of the method of connecting the nut K with the collar by means of the lugs *g g*. I also find a threaded shank connected with the opposing jaw *a*. I also find in Figure 1 the jaw connected with a collar by the piece *m*, corresponding to E in complainant's patent.

Figures 4 and 5 are similar in construction to Figure 1, but there are two connecting pieces, *m* and *w*, connecting the jaw *b* with the collar *a*.

In Figure 7, plate 328, I find a nut, M, connected with the collar *a*, which carries the movable jaw *b* in combination with the threaded shank R of the jaw *a*. The nut and collar are so connected together that the nut revolves freely, but both advance and recede as one. The collar is connected with the movable jaw *b*, through the piece *c*, to which the collar *a* is riveted, and only by the connection of *c* and *a* a collar is formed, which completely surrounds the nut.

Q. 17. Describe the invention set forth in complainant's patent 67643, as the same is set forth in that patent.

A. The patent referred to describes a specific manner of forming the connection between the cross-head or collar, and the nut in a mop-head, otherwise substantially similar to the one in complainants' patent, 54860.

As shown and described, the collar is divided longitudinally in two halves, forming semicircular pieces with grooves to receive and re-
92 tain the flange or wings of the nut. The two halves when united surround the nut and retain it in position.

Q. 18. Is there any other mode of enclosing the nut, described or shown, or suggested in said patent, than that mode of dividing the collar longitudinally or in the direction of its axis?

A. No.

Q. 19. Please examine Defendants' Exhibit J, and state whether or not, in your judgment, it contains or uses a construction of making the collar of the loose jaw in two parts, so that the nut for operating the loose jaw may be placed between them, and when connected together the collar surrounds the nut, and retains it in position, substantially in the manner and as described in complainant's patent 67643, and give your reasons for any opinion you may express.

A. I have examined Exhibit J, and I do not find the arrangement referred to in the question, substantially in the manner and as described in said patent.

The cross-head connected to the movable jaw is not divided longitudinally in two halves, as shown and described in said patent; it is, on the contrary, divided at right angles to the axis in two parts, one of them being a complete collar for surrounding and retaining the wings of the nut and to allow it to have a free rotary motion; and this piece, also, has a flange, while the other piece forms a flange to prevent endwise motion of the nut relative to the collar; the collar is not divided in two semicircular pieces or halves, and the two parts of the cross-head have different functions.

(Defendants offer in evidence extracts from Technological Encyclopædia by Joh. Jos. Prechtl, and an English translation thereof, pages 28 and 29 of volume 14, and Figures 1, 2, 3, 4, and 5 of Plate 327, also pages 33 and 34, and Figure 7 of Plate 328, and the same is marked "Def'ts' Exhibit Prechtl 1; R. E. S., Ex'r."

Also the extract from page 523 to 525 of volume 9 of the last-named work, and of Figures 1, 2, and 3 of Plate 187, of volume 1 of plates thereof, and the same is marked "Exhibit Prechtl 2; R. E. S., Ex'r," together with translation of said Exhibit Prechtl 2.

Also a model purporting to be a model of the part shown in Exhibit Prechtl, the said model being marked "Def'ts' Exhibit Prechtl Model; R. E. S., Ex'r."

Also a mop-head and extra collar and nut of def'ts' manufacture, the making of which is charged by complainant to be an infringement of his patent 67643, and the same is marked "Def'ts' Mop, R. E. S.; Ex'r."

93 Also, a sample of a mop and extra collar and nut, marked "Def'ts' Exhibit Three-part Mop; R. E. S., Ex'r."

Also a model of a screw jack, and the same is marked "Def'ts' Ex. Hartmann; R. E. S., Ex'r."

Also a mop-head constructed under Taylor's patent, February 15, 1859, and the same is marked "Def'ts' Exhibit Taylor Mop; R. E. S., Ex'r."

Also a copy of Plate 24 of a printed work entitled "Encyclopædisches Handbuch der Maschinen und Fabrickwesens, &c.," by Carl Hartmann, published at Leipsig and Darmstadt, Germany, in the year 1838, and the same is marked "Def'ts' Hartmann Drawing Exhibit; R. E. S., Ex'r.")

Q. 20. Please make the same comparison between Defendants' Exhibit Three-part Mop and said Complainant's Patent 67643.

A. Exhibit Three-part Mop is substantially the same as Exhibit J, except that the cross-head of the movable jaw is divided into three parts at right angles to the axis, one part forming the collar which surrounds the

wings of the nut and prevents endwise motion in one direction, while the other two parts form a flange to prevent endwise motion in the other direction.

Q. 21. State whether or not you have read and examined Defendants' Exhibits Patent, Gray, and Adams, and Gray and Adams Model, and Exhibit Hartmann and Hartmann Drawings, and the Prechtl Model, and Exhibits Prechtl 1 and 2; and do you understand the construction shown therein.

A. I have examined the exhibits referred to and I believe I understand the construction shown therein.

Q. 22. State whether or not you find in any of defendants' exhibits in this case, and if yea, in which of them, any mechanism or construction containing a collar enclosing a nut, said collar being made in two parts, and so that when connected together said collar shall surround the nut and retain it in position, substantially as set forth in said letters patent of complainant 67643, and give your reasons for any opinion you may express.

A. I find in Exhibit Gray and Adams, and Model Gray and Adams, a collar divided in two halves in a longitudinal direction, forming two semi-cylinders, which, when united, surround the nut and retain it in position, so that the nut can freely rotate while it is confined to the collar in a longitudinal direction. I quote from the specification of Exhibit Gray and Adams: "H is the cast collar in which the nut D revolves; this collar is cast in two vertical sections so as to fit snugly to the nut, and is
94 hexagonal on the outside, so that it cannot turn in its framing of heavy timbers."

I find in Exhibit Prechtl Model and Exhibit Prechtl 2 a collar divided longitudinally in two halves, which, when connected together, surround the nut and retain it in position. I quote from the description: "The neck is surrounded by a tube which, for bringing it in place, is cut entirely in the direction of its greatest diameter and consequently consists of two halves."

In Exhibit Prechtl 1, I find in Figures 7 and 8, a collar consisting of two parts, *a* and the end of *c*, which, when connected together, surround the nut and retain it in position, so that the nut may revolve freely, but that the nut and collar advance and recede together.

I consider all the devices mentioned substantially the same as described in complainant's patent.

In Exhibit Hartmann and Exhibit Hartmann Drawing I find a nut confined by a piece forming a collar, and at the same time preventing endwise motion, and another piece acting as a flange, the two being connected by two plates and screws, so as to confine the nut in a longitudinal direction while it is allowed to rotate freely. The division of the two principal parts confining the nut is at right angles to the axis of the nut; and if complainant's patent refers to any method of making a collar and its flanges in two parts, then this is such an arrangement, but the division in two parts is made in a different manner from what is shown and described in complainant's patent.

Q. 23. The claim in complainant's patent 67643 speaks of a loose jaw in the words, "collar of a loose jaw." Please state what that loose jaw is and what its office is as described in said patent; and also state whether or not such, or substantially such, a device as that loose jaw is found in the

exhibits referred to in your last answer or in any of them; and, if so, in which, and give your reasons for any opinion you may express.

A. The loose jaw is the one which has longitudinal motion when the other jaw or any piece firmly connected to it is held fast; the longitudinal motion being imparted by revolving the nut.

If in the same device the so-called loose jaw is held fast, and the nut revolved, the other jaw has longitudinal motion, the device remaining the same. The object of the loose jaw is to exercise a pressure by its motion in relation to the other jaw, or to release the pressure.

I find such a loose jaw in Prechtl Ex. 1, Figure 7. I also find such a loose jaw in Exhibit Gray & Adams, because by firmly securing or holding the platen of the press, or by holding or suspending the screw, the press bottom, which is connected with the collared nut, becomes a movable jaw.

95 If in Exhibit Hartmann the upper end of the screw bears against the fixed abutment while the end of the wooden box bears against the compressible material, then this end forms a movable jaw.

Exhibit Prechtl Model might be used in the same manner as the one last mentioned, but I do not believe that it was intended for such use.

Q. 24. Is there any difference in the office or function or operation of the divided collar or jaw, or equivalent, and the nut enclosed by such divided collar, as the same are shown in def'ts' exhibits mentioned in your last two answers, and the office or function or operation of the divided collar or loose jaw and enclosed nut as found in said patent 67643?

A. There is no difference in the operation or function.

Court adjourned to 5th inst., at 11 a. m.

SATURDAY, *December 5th*, 1874.

Present: Counsel as before.

Continuation of examination of Mr. Faber du Faur.

Q. 25. Look at the model of a screw jack now shown to you, and state what it represents.

A. This model represents the screw jack in Hartmann Drawing Exhibit, Figure 5, where the spindle is rotated in the nut fixed at the top of the wooden case.

(Defendants' counsel offer said model in evidence, and it is marked "Def'ts' Model Hartmann Exhibit 5; R. E. S., exam.")

Q. 26. What does the screw jack model Exhibit Hartmann represent?

A. It represents the screw jack in Hartmann Drawing Exhibit, Figures 6 and 7, where the nut revolves and the screw spindle has only longitudinal motion.

Q. 27. Is the Hartmann Drawing Exhibit a part of a printed book or publication?

A. It is.

Q. 28. Where is the rest of the work of which said drawing purports to be a part?

A. It is in my possession, but I have not the complete work; I have part of the plates and part of the text, and have had them in my possession for about twelve years.

Q. 29. Will you produce the part of said work which you have in your possession?

A. I will. It is at my home in Newark.

Q. 30. Is the work of Prechtl above referred to a printed publication; and, if yea, when was it, or the volumes 9 and 14 and accompanying plates of said work, published?

96 A. It is a printed work, and is found in the Astor Library in this city, where I examined it. The 9th volume was published in 1838, and the 14th volume in 1846, as printed on their title pages.

Complainant's counsel waives the cross-examination of this witness.

A. FABER DU FAUR.

Subscribed and sworn to before me this 5th day of December, 1874.

R. E. STILWELL, *Examiner.*

Adjourned to December 8th, 1874.

JOHN BOYD ELIOT, being duly sworn as a witness on behalf of defendant, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. John Boyd Eliot; age, 47 years; residence, New York City; occupation, mechanical engineer and solicitor of patents, and for the last 17 or 18 years have been much engaged as an expert in patent causes before the United States courts.

Q. 2. State briefly what opportunities you have had to qualify you as an expert in patents and to testify in the trial of patent causes?

A. I am generally familiar with the various branches of science as applied in the arts; am a practical mechanic; have planned a great variety of machinery and superintended the construction thereof, often making drawings and patterns and fitting up the work, both in wood and metal. I have solicited more than two thousand patents, and for the last 17 years have often testified as an expert in a great variety of cases in which inventions and the patents therefor formed the subject of the controversy.

Q. 3. Have you read and do you understand the complainant's patents Nos. 54860 and 67643 under which this suit is brought; and, if yea, do you understand the inventions therein described and claimed?

A. I have examined certified copies of the patents referred to, and I do understand the inventions therein set forth.

Q. 4. What do you understand to be the inventions described and claimed in the Clark and Garretson patent No. 54860?

A. The inventions contained in said patent consist of two distinct contrivances, the first of which is very clearly set forth in the preface of said

97 patent, and is there stated to "consist in the combination of a collar provided with wings, or their equivalent, which carry the movable jaw, and an adjusting nut, with which it is connected by means of a flange and lugs with a threaded shank and fixed cross-head," the several parts co-operating together to operate the movable jaw relatively with a fixed jaw, for the purpose of clasping and holding articles between them. Said patent also explains that the lugs by which the collar and the nut are held together may be greatly varied in their construction. It recites as follows: "The lugs *g g* may be placed on the nut and the flange *h* on the collar with the same effect, or a greater number of lugs than two may be employed if desired, or an annular flange on the collar may be extended over and around

the flange of the nut, or the nut elongated to extend through the collar and the two secured together by any ordinary means known to mechanics, all of which would be equivalent both in effect and in construction, provided they accomplish the one end essential to the operation of the invention, namely, the connecting of the collar and nut together so that the latter revolves freely, but both advance and recede as one;" from which language I am well satisfied that it was the intention of the inventor to cover as broadly as possible all forms of such combination. The first claim in said patent also leads me to the same conclusion. The second contrivance set forth in said patent merely relates to the manner of connecting the wire frame or movable jaw with the aforesaid collar, and it consists in curving the ends of the movable jaw around and over the sides of the collar opposite to where the pressure is exerted between the jaws, and there inserting them into holes in the collar parallel to the axis of the nut, so that the greater the pressure between the jaws the greater will be the force exerted between the points of contact of the movable jaw and the collar to hold them together, and thereby less care will be required in riveting them in the process of manufacture, and these means of connection constitute the essential characteristics of the second claim in said patent.

Q. 5. Have you read and do you understand the letters patent marked "Def'ts' Park Ex.," "Def'ts' Boardman Ex.," "Def'ts' Merrick Ex.," "Def'ts' Randlett Ex.," "Def'ts' Exhibit Briggs," and also the screw-wrench marked "Def'ts' Exhibit Model Briggs," and "Def'ts' Homes Ex.," and "Def'ts' Karr Ex.," and "Def'ts' Taylor Ex.," and have you examined the claim and drawing, in the Patent Office Report, of Def'ts' Barnes Ex., and do you understand the several constructions described and shown in said exhibits respectively?

A. I have examined the several exhibits referred to, and I believe I understand the inventions therein represented.

Q. 6. State whether or not you find in any of said exhibits the
98 invention mentioned by you as constituting the first of the contrivances specified in the complainant's patent No. 54860.

A. I do find in several of said exhibits substantially the same combination of mechanical devices, arranged and co-operating together in substantially the same manner and for substantially the same purpose as the contrivance specified in said patent and referred to in the first claim thereof. To specify them in detail, I refer, first, to Defendants' Exhibits Park Ex. and Boardman Ex., in both of which there is the combination of a collar provided with wings, or their equivalent, which carry the movable jaw, and an adjusting nut, with which it is connected by means of a flange and lugs, or their equivalent, with a threaded shank and fixed cross-head, substantially as set forth in the complainant's patent and referred to in the first claim thereof. These several parts in both the Park and Boardman exhibits are so constructed and so combined, and co-operate together in such a manner for moving the jaws relatively to each other or so that both the collar and the nut "advance and recede as one," that the recital of invention contained in the first part of complainant's patent No. 54860, and also specified in the first claim of said patent, is, in my opinion, as applicable to the contrivances mentioned by me in the said Park and Boardman exhibits as the combination of the devices constituting the first of the

contrivances set forth in the said complainant's patent No. 54860; or, in other words, the combination of a movable jaw, winged collar, the nut connected therewith, the threaded shank, and a cross-head may be clearly read from the specification of complainant's patent and covered by the first claim thereof. I also find substantially the same combination in defendants' exhibits Exhibit Merrick, in Exhibit Briggs, and Exhibit Model Briggs, and also in Exhibit Randlett, all of which I regard as mere modifications of the combination referred to by me as constituting the first of the contrivances set forth in complainant's patent. In making this statement I have taken into consideration the fact that in some of them the movable jaw is connected with the collar that is operated by the nut on only one side, instead of opposite sides, as represented in complainant's patent; but I regard these as mere equivalents, and not necessary in these cases, owing to the peculiar shape of the jaw. I have also had in view the fact that in the Randlett Exhibit the shank of the stationary jaw is not threaded, but is provided with a projection on one side upon which an inclined collar works in substantially the same manner as the section of a screw thread or a portion of an inclined plane, which is a mechanical equivalent of a screw thread, and the co-operation of the several parts together produce substantially the same result as the contrivances referred to in the first claim of complainant's patent.

Q. 7. What difference, if any, is there between the office or function of the two jaws of the mop-head shown in complainant's patent
99 54860 and the office or function of the two jaws of a wrench, so far as holding or confining something between them is concerned?

A. They are substantially the same.

Q. 8. Considering the state of the art of operating the movable jaw by means of a connected collar and nut on the screw shank of an opposing or stationary jaw to have been, prior to Taylor's patent of 1859, such as is shown in the Briggs' patent of 1859 and the Merrick patent of 1848, was any addition made to the art in or by the arrangement for operating the movable jaw as described in complainant's patent 54860.

A. In my opinion none whatever.

Q. 9. State whether or not the several inventions which form the subject of complainant's patent 54860, and which are specified in the two claims of said patent, are dependent upon or independent from each other in their respective functions or operations.

A. They are independent of each other, and constitute, as I have already said, two distinct contrivances.

Q. 10. Please examine the mop-heads marked Defendants' Ex. Mop J, and Def'ts' Ex. Three-part Mop, and state whether or not you find in them or either of them the invention specified in complainant's patent 54860, and referred to in the second claim thereof, and give your reasons for any opinion you may express.

A. I have examined said exhibits, and do not find in either of them the invention or contrivance referred to in the second claim of said patent, for the reason that in neither of them are the wires that connect the movable jaw with the collar curved or bent round in the form of a bow, so as to bring their points of contact with the collar parallel with the axis of the nut, or in such position that the greater the pressure between the jaws the greater will be the force exerted to hold the ends of said wire in con-

nection with the collar. In the defendants' exhibits the ends of said wires are connected with the collar at right angles to the axis of the nut, and the force exerted upon them has no effect whatever in holding them in connection therewith.

Q. 11. Please describe what you understand to be the invention set forth in the second patent of complainant, No. 67643.

A. The invention pertains to certain improvements in mop-heads, and is clearly set forth in the recital of invention in said patent, where it states that it consists "in constructing that part of the loose jaw that forms the collar in two parts or halves, with the inner surfaces properly grooved to receive and retain the flange or wings of the nut." And the claim in said patent specifies distinctly "making the collar of the loose jaw in two parts;" and I find by referring to the drawings, and also to the description, that said collar is provided with a groove on the inner surfaces to receive and retain the flange or wings of the nut, and that said collar is divided into two semicircles, or by a plane parallel with the axis of the nut, or in its longitudinal direction, so that when the two halves or semicircles are placed together around the nut and fastened together they form a continuous collar, and they hold the nut in position by clasping the circumferential flange of the nut in a corresponding groove formed by their being so combined.

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Q. 12. Please examine Defendants' Exhibits Mop J and Exhibit Three-part Mop, and state whether or not you find in either of them the invention specified in said complainant's second patent, No. 67643, and give your reasons for any reason you may express.

A. I have examined these exhibits, and I do not find in either of them the invention set forth and claimed in said patent, for the following reasons: In neither of said exhibits is there a collar divided for the purpose of surrounding the nut, nor in either of them or in any portion of them is there a groove formed for the purpose of clasping a flange upon the nut, but in both of said exhibits the collars that surround the nuts are cast complete in relation to their circumference, so that they embrace the nut or surround it completely without being fastened together, which is not the case in the collar set forth and claimed in the said complainant's patent. The construction and organization of the parts forming the complete collar in the defendants' exhibits, referred to in the question, require that the collar shall be divided by a plane at right angles to the axis of the nut, so that the nut may be tilted into its proper working position in the collar which surrounds it, and be held there by the other portion, acting simply as a washer to hold the nut in a central position within the collar into which it is first placed or tilted.

Such a construction I do not find in any portion of the complainant's said patent, neither shown in the drawings, nor described in the specification, and, therefore, I regard the invention in said exhibits as substantially different from the contrivance specified in the claim of said patent.

Adjourned to December 9th, 1874, at 12 a. m., same place.

Parties met as before, December 9, 1874, same place.

Q. 13. Have you read and examined defendants' exhibits, to wit, the patent of Gray & Adams, the Gray & Adams model, the two Exhibits Models Hartmann, the Hartmann drawings, the Exhibits Prechtl, and the

Prechtl model, and do you understand the constructions shown and described therein respectively?

A. I have examined said exhibits, and believe I understand the construction set forth in each of them.

101 Q. 14. State whether or not you find in either of said exhibits any mechanism or construction containing a collar enclosing a nut, said collar being made in two parts and of such a form that when connected together said collar shall surround the nut and retain it in position, substantially as set forth in complainant's second patent, No. 67643.

A. I do find in all of said exhibits substantially such a construction of a collar for enclosing a nut, and so made that when the two parts are connected together they retain the nut in a proper working position. For example, in the Defendants' Exhibit Gray and Adams Patent, and also model Gray and Adams, which is a correct representation of a portion of the mechanism shown and described in the said Gray & Adams patent, I find a collar divided in two parts, forming two semi-cylinders, said division being made by a plane parallel to the axis of the nut, and said collar is so constructed that when the two parts are united they surround the nut in such a manner as to retain it in working position relatively to the part with which the collar is connected, and the construction is such that the nut can rotate freely within the collar and travel with it in a longitudinal direction. The specification of the said patent Exhibit Gray & Adams recites as follows: "H is a cast collar, in which the nut D revolves. This collar is cast in two vertical sections, so as to fit snugly to the nut, and is hexagonal on the outside, so that it cannot turn in its framing of heavy timbers," which language is just as plainly descriptive of the collar claimed in the said Garretson's patent 67643, so far as the elements recited in the claim are concerned, as the description contained in the said specification, unless said patent be construed to be limited to a collar cast in two parts, each of said parts being provided with a "recess" to receive the flange of the nut, for retaining it in position.

In the Gray & Adams Exhibit the collar is held in position longitudinally on the nut by a flange formed on the nut, both at the top and bottom, which extends out over the opposite ends of the collar, and thereby prevents the collar from shifting longitudinally on the nut, and there is also in one of said flanges a recess for the reception of friction spheres, in order that the parts may work more smoothly than they would otherwise, but the object of said flanges is for substantially the same purpose as the recess in the two halves of the collar described in complainant's patent, and therefore I regard the two devices as substantially the same.

In each of the other exhibits referred to in the question I find also various modifications of substantially the same thing, which I find fully explained in the testimony of Mr. A. Faber du Faur, who has just preceded me in this case, whose testimony I have read, and with which I fully agree, and therefore I need not encumber the record by referring to them in detail.

Q. 15. You have spoken in your last answer of "a recess to re-
102 ceive the flange of the nut, for retaining it in position." Do you find such recess specified in the claim of said patent?

A. I do not find any allusion whatever made to it in said claim, other than what construction may be put upon the word "retains," which word I find in the claim, and which has reference to holding the nut in position.

Q. 16. What, if anything, retains the nut in the divided collar in the Gray and Adams patent and model?

A. The flanges on the nut retain it in position longitudinally, and the collar surrounding the nut circumferentially.

Cross-examination reserved at request of counsel for complainants.

JOHN BOYD ELIOT.

Subscribed and sworn to before me this 9th December, 1874.

R. E. STILWELL, *Examiner.*

Adjourned to Saturday, Dec. 12th, instant.

SATURDAY, *December* 12, 1874.

Present: Counsel for both parties as before.

Cross-examination of John Boyd Eliot reserved, at the request of counsel for complainant, until Thursday, December 17th, 1874, and it is consented by counsel on both sides that the defendants' exhibits may be sent on to Rochester, N. Y., to Mr. Macomber, solicitor in this case for the defendants, without waiting for the completion of the cross-examination of Mr. Eliot.

I, R. E. Stillwell, an examiner, &c., duly appointed by the circuit court of the United States for the southern district of New York, do certify that on the days mentioned in their respective depositions, hereto annexed, Charles B. Clark, A. Faber du Faur, and J. Boyd Eliot appeared before me, and after being duly and publicly sworn gave their depositions, which were taken down by a clerk appointed by me for that purpose, and they subscribed the same in my presence.

I further certify that John Van Santvoord, esq., appeared as counsel for defendants, and Gilbert M. Plimpton as counsel for the complainants, on the taking of the same.

R. E. STILWELL, *Examiner*, &c.

(Endorsed:) Filed Jan'y 21, 1875.

103 United States circuit court, northern district of New York. In equity.

OLIVER S. GARRETSON)
vs.
CHARLES B. CLARK ET AL.)

Testimony taken in behalf of the defendants, before Joseph D. Husbands, U. S. commissioner and examiner in chancery in and for said district, at the city of Rochester, the 17th day of December, A. D. 1874, in said northern district of New York.

Present: F. A. Macomber, solicitor for defendants, and complainant in person.

RUFUS F. OSGOOD, a witness called by the defendants, being first duly cautioned and sworn, in answer to questions propounded by the defendants' counsel testified as follows, at Rochester aforesaid:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Rufus F. Osgood; my age is forty-two years; my residence is Rochester, N. Y.; and my occupation is that of a solicitor of patents for inventions, and have been such for eighteen years.

Q. 2. State whether you are acquainted with and have made a study of mechanical principles and their application to the mechanic arts.

A. I have made mechanical principles and their application to various mechanical devices a study for eighteen years, and I think I am acquainted with them.

Q. 3. Have you examined the complainant's patents Nos. 54860 and 67643, under which this suit is brought, and do you understand the inventions therein described and claimed?

A. I have examined the certified copies thereof here produced, and I think I do understand the inventions therein described and claimed.

Q. 4. What do you understand to be the inventions described and claimed in the said patent No. 54860?

A. That patent is composed of two claims, the first of which is a construction embodying a nut, K, movable jaws, E E, lugs, *g g*, a threaded shank constituting a part of the stationary jaw. The second claim is the method of connecting the movable jaw E E with a movable collar, D, by means of bows, *l l*, in such a manner that the strain is downward from the bows, thereby having a tendency to obviate breakage at the riveting point by pressing the ends of the bows more firmly in their seats.

104 Q. 5. State whether or not the several inventions which form the subject of said patent No. 54860 are dependent upon or independent of each other in their respective functions and operations.

A. They are independent of each other, for the reason that each constitutes a distinct invention by itself, and could be used in a mop-head without embodying the features of the other claim.

Q. 5½. Have you read and do you understand the letters patent marked "Def'ts' Park Exhibit," "Def'ts' Boardman Ex.," "Def'ts' Merrick Ex.," "Def'ts' Randlett Ex.," "Def'ts' Exhibit Briggs," and also the screw-wrench marked "Def'ts' Exhibit Model Briggs," and "Def'ts' Homes Ex.," and "Def'ts' Karr Ex.," and "Def'ts' Taylor Ex.," and do you understand the several constructions described and shown in said exhibits respectively?

A. I have examined them, and I understand them.

Q. 6. State whether or not you find in any of said exhibits the invention mentioned by you as constituting the first of the contrivances specified in the complainant's patent No. 54860.

A. I find in several of them a combination of parts which corresponds in operation and in functions with the first claim of said patent No. 54860. In Def'ts' Park Ex. I find a stationary head, D, which corresponds with the stationary head C of said patent No. 54860; also a movable head, E, which corresponds with the movable head E in said patent; also a shank, B, with a screw, *f*, on which is situated a nut, I, confined in an open slot, and serving to give motion to the shank and movable head in a manner similar to that in patent No. 54860, the effect being to clamp and tighten any article placed between the heads D & E. In this case (i. e., in Park Ex.) the slot in which the nut is placed serves to retain the nut in position, and answers the same purpose as the lugs *g g* in patent No. 54860.

In Boardman Ex. I also find a similar arrangement, in which stationary

and movable heads, *b b'*, are used, a sliding shank, C', with a screw, E, at the end, a nut, *g*, resting on the screw *c*, being confined in a seat in the handle, and so arranged as, when turned, to give motion to the sliding shank, thereby clamping the two heads *b b'* upon the article placed between them, the combination of parts in this case being the same as in the first claim of patent No. 54860.

In Exhibit Briggs and Exhibit Model Briggs I also find stationary and movable heads marked on the drawing, C & E, a shank, A, with screw, B, and a sleeve, G, with a nut, F, at its top, which turns with a screw, also a groove in the nut with a lug resting therein, formed upon the bottom of the shank of the movable head E. As the nut is turned the movable head is carried up and down with it by means of the connection with the lug, the connection being the same as the lugs *g g* in patent No. 54860.

In Exhibit Merrick I also find stationary and movable heads, the movable head being operated by a nut turning on a screw-shank; and in Figure 5 of said exhibit a nut, G, is used, formed with a groove, in which rests a ring, I, thereby giving motion to the movable head as the nut is turned.

In the several mop-heads shown in Randlett Exhibit, Taylor Exhibit, and Karr Exhibit approximate arrangements are shown, especially
105 in the Karr Exhibit, which represent two clamping-heads, D, E, a cross-head, B, to which the lower clamping-head is attached, and a nut, C, turning upon the screw A, the same parts being thus employed in this exhibit as embodied in the first claim of the complainant's patent No. 54860, with the exception of the lugs *g g*, and the Exhibit Karr has a screw-thread on the inside of the cross-head B, while the collar in the complainant's patent has no screw-thread, but slides free. The mop-head of Exhibit Karr showing the same general parts as in the complainant's patent, as embodied in the first claim of said patent, I should hardly consider it more than a mechanical expedient to apply the lugs *g g*, as shown in the complainant's patent, to give a simultaneous motion to the nut and collar, since such devices are well known and are shown in Exhibit Model Briggs and in some of the other exhibits above referred to.

Q. 7. What difference is there, if any, between the office or function of the jaws of the mop-head shown in the complainant's patent No. 54860 and the office or function of the two jaws of a wrench, so far as holding or confining something between them is concerned?

A. I see no difference in the functions of the two; they both serve the purpose of clamping, and nothing more, and they do it in substantially the same way.

Q. 8. Considering the state of the art of operating the movable jaw by means of a connected collar and nut on the screw-shank of an opposing or stationary jaw to have been, prior to Taylor's patent of 1859, such as is shown in the Briggs patent of 1859 and the Merrick patent of 1848, was any addition made to the art in or by the arrangement for operating the movable jaw, as described in complainant's patent No. 54860?

A. I think not.

Q. 9. Please examine the mop-heads marked "Defendants' Ex. Mop J and Def'ts' Ex. Three-part Mop," and state whether or not you find in them, or either of them, the invention specified in complainant's patent No. 54860 and referred to in the second claim thereof, and give your reasons for any opinion you may express.

A. I find nothing in either of these exhibits, Three-part Mop or Mop J, which corresponds with claim 2 in said patent. The reasons are that the specification describes the parts *l l* and the drawings show them as bows which rise over the ends of the cross-head and turn down and are riveted therein, and the object, as described, is to make them hold the tighter as the strain is applied. The claim is also made to the bows *l l*, connecting the collar and movable jaw, constructed and operating as described. In the exhibits referred to I find no bows, but simply straight right-angle arms, and there is no tendency to make them hold tighter as the strain is applied. The ends of the arms are inserted in the cross-head at right angles to the axis of the nut, instead of parallel or approximately so, as shown in patent No. 54860.

Q. 10. What do you understand to be the invention set forth in the second patent of complainant, No. 67643?

A. It consists, as I understand it, in making the collar of the loose jaw in two parts, having the inner surfaces grooved to receive and re-
106 tain the wings of the nut, so that when the said two parts are riveted together the said wings resting in the groove prevents the displacement of the nut, but allows it a free turning movement; the said halves also being cast with recesses and rivet-holes, so that no reaming or drilling is required. The collar is divided vertically or in line with the axis of the handle, forming two half rings, which are placed around the nut enclosing it.

Q. 11. State whether you find in Def'ts' Ex. Mop J and in Ex. Three-part Mop, or either of them, the device or invention specified in said patent No. 67643, and give your reasons for any opinion you may express.

A. I do not find the invention there described and claimed in the said patent to be in either Ex. Mop J or in Ex. Three-part Mop. It is described as a condition in the said patent that the inner surface of the two parts or halves is grooved to receive and retain the flange or wings of the nut, and in the drawings such a groove is shown with the wings resting in the groove in such a manner that the nut cannot be removed except by separating the parts of the collar. It is also a condition in the claim that when connected together the collar surrounds the nut and retains it in position, by which I understand that it is retained by the groove just described. In Ex. Mop J there is no such groove for retaining the nut, but the nut can be inserted and removed from the collar through the open top of the same without separating the parts of the collar. I therefore conclude that the collar does not surround the nut and retain it in position in the sense indicated in the claim of complainant's patent.

In regard to Def'ts' Ex. Three-part Mop I find that it is not made in two parts, but in three, and that these three are essential to make it operative; that it would not be operative with any two parts alone, as the nut would be open and exposed and would not retain its place.

Q. 12. Have you read and examined the defendants' exhibits, to wit, the patent of Gray & Abrams, the Gray & Abrams Model, the two Exhibits Models Hartmann, the Hartmann Drawings, the Exhibits Prectell and the Prectell Model, and do you understand the construction shown and described therein respectively?

A. I have not examined them.

RUFUS F. OSGOOD.

Sworn and subscribed this 17th day of December, A. D. 1874, before me.

[L. S.] J. D. HUSBANDS,
U. S. Commissioner and Standing Examiner in and for said District.

NORTHERN DISTRICT OF NEW YORK, *ss:*

CITY OF ROCHESTER,
December 17, *A. D.* 1874.

The right to make objections to the foregoing testimony, or any part thereof, and to cross-examine the said witness, by consent, is reserved to the complainant at a future day to be agreed on, or, in case of want of such agreement, on a notice of three days by mail.

J. D. HUSBANDS,
U. S. Com.

(Endorsed:) Filed Jan'y 21, 1875.

107 Circuit court of the United States, northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK.

Testimony on the part of the defendants, taken before me the 19th day of December, 1874.

Mr. Hyatt for the complainant, Mr. Macomber for the defendants.

JAMES SANGSTER, sworn as a witness for the defendants, testified as follows:

My name is James Sangster; age, about 43; residence, Buffalo, N. Y.; occupation is mechanical engineer.

(Defendants' Exhibit F is shown witness.)

I am acquainted with a mop-head somewhat similar to this; have been acquainted with such mop-head since 1849, or before that. It is not exactly like this in some respects.

(Defendants' Exhibit I is shown witness.)

Q. Are you acquainted with this mop-head; and, if so, how long have you been so acquainted with it?

A. Since 1849. I have known it to be in use as early as that, and prior to that.

On being cross-examined the witness said:

Q. State wherein Exhibit F is not exactly like the one you were familiar with in 1849, or prior thereto.

A. As near as I can remember, this cross-head which is grooved in Exhibit F was made more like the cross-head in Exhibit I, in the one I was familiar with. I do not remember the nut being in the shape as shown in Exhibit F. I think it was a wrought nut in the one I was familiar with; I think the collar to which the wire binder is attached was made more like that shown in Exhibit I than the one in Exhibit F. I think Exhibit I more correctly represents the mop-head as I recollect it.

JAMES SANGSTER.

Examination taken, reduced to writing, read over to the witness, and by him subscribed before me this 19th day of December, 1874.

GEORGE J. SICARD,
Examiner.

ALBERT STORER, sworn as a witness for the defendants, testified as follows:

My name is Albert Storer; residence, Buffalo; age, 33 years; occupation is manufacture of telegraph instruments. I know complainant and defendants. Have known Mr. Garretson since the summer of 1865, I think, and Mr. Charles B. Clark since the fall of 1865.

108 Q. 1. At that time—the latter part of 1865, or fore part of the year 1866—were you at work in the same building in Buffalo occupied by Mr. Clark or Mr. Garretson?

A. I was at that time.

Q. 2. Do you remember the time when Mr. Clark showed you a sketch of a mop-head; and, if so, state when it was?

(Objected to by complainant's counsel as leading.)

A. He did not show it to me; he showed it to Mr. Garretson in my presence. I think it was in the latter part of December, 1865; it might have been a little later. I have no means of fixing the dates.

Q. 3. At what place was this?

A. At the works of the Townsend Manufacturing Company, on Main street, Buffalo; think it was in the front room of the second floor; might have been the third floor.

Q. 4. Was any one else present except Charles B. Clark, Garretson, and yourself?

A. I think not.

Q. 5. Describe the drawing that Mr. Clark there exhibited, and state fully what was done and said by Clark or Garretson.

A. The drawing was a rough pencil sketch, and represented a cross-head with a screw attached, forming a part of the handle, all in one casting. Upon that screw was a nut and collar carrying the ends of the wire that encircled the cross-head. The wire entered the collar from the side next the cross-head, as in Exhibit F. The nut was on the upper or outer side of the collar. I am not positive how it was secured to the collar, but I think it was by means of a flange on the nut fitting under the lugs on the collar. That is as near as I can recollect; the matter is rather indefinite in my mind. Mr. Clark produced a piece of paper which had the sketch on, and he made some additions to it or changes in it before he produced it to Garretson. I did not hear much that was said, as it was said in a low tone of voice, probably not intended for me to hear. I inferred it was not intended for me to hear. I know very little of what took place.

Q. 6. Did you hear Clark and Garretson there arrange for a further interview on the subject? If so, state when and where that interview was to take place.

A. I did; the interview was to take place at the residence of Mr. Clark, that evening.

Q. 7. State whether or not you afterwards, and, if so, state when, you saw the same or another sketch of a mop-head in the hands of Mr. Clark.

(Objected to by complainant's counsel as immaterial.)

A. Mr. Clark produced a drawing, I think, on the following morning; might have been later.

Q. 8. State in what respects, if any, the drawing last mentioned differed from the first sketch you have described.

A. The only difference that I recollect was that the wire, instead of coming in at the lower side of the collar, was bent over and came in at the upper side. The manner that the nut was connected with the
109 yoke was more clearly shown, showing the lugs on the yoke and the flange on the nut. That was the only difference, except that the draft was ruled and made with care, while the first sketch was made carelessly. The only difference between the two that I am certain of is as to the wire being bowed and entering on the upper side in the drawing last produced.

On being cross-examined by complainant's counsel the witness said:

X Q. 9. Please describe more particularly the room in which you say Mr. Clark showed Mr. Garretson a sketch of a mop-head, and where they were when you first saw the sketch.

A. The room was over the store of the Townsend Manufacturing Company. I am not positive whether it was on the second or third floor. The bench I was working at was on the front side of the room, fronting Main street. There was a bench along the left-hand side, on which Mr. Garretson's blind-hinge patterns were lying, and which he was working at. There was a good deal of material of some kind or other, mostly wire and wire-work, in the room, and several benches. The exact location of them I cannot give, as they were sometimes moved.

X Q. 10. How did you come to see this sketch you have referred to at this time if Mr. Clark did not show it to you?

A. Having occasion to go down stairs, I had to pass by the bench where they were, and saw it lying on the bench, and I also saw it in Mr. Clark's hands; I did not stop to examine it as I went by.

X Q. 11. Was this time when you went down stairs the only time you saw this sketch?

A. It was not. I could see it from where I was working, ten feet away, more or less.

X Q. 12. On what material and how was the sketch made?

A. It was on paper; I think it was brown, but am not sure. The paper was irregular in shape. It was in black lead pencil, as near as I recollect. I am not positive.

X Q. 13. Could you, at the distance of ten feet, see the character of the sketch, if made on brown paper by an ordinary lead pencil, so as to determine how it was made?

A. Of its general outlines I could. It was the size of a mop-head.

X Q. 14. You say that Mr. Clark added something to the sketch before showing it to Mr. Garretson. Did you see what he added to the sketch?

A. I did not.

X Q. 15. Do you recollect what time of day this was?

A. I am not sure, but think it was about nine o'clock in the morning.

X Q. 16. Did you pay particular attention to what Mr. Clark and Mr. Garretson were doing in the shop at this time?

A. As much as I could consistently under the circumstances. I think

I was at work in the same room on a model of a vise or a blind-hinge; am sure it was a vise; I am not positive, but very near that.

X Q. 17. Can you swear that this sketch you refer to was not made on white paper?

A. I could not. I did not pay particular attention to the kind o paper.

110 X Q. 18. Did you see what was on the sketch before Mr. Clark made the alterations you referred to?

A. I did not.

X Q. 19. You were not inquisitive, so as to pay more than casual attention as to what Mr. Clark and Mr. Garretson were doing at that time?

A. I was. I paid particular attention, as much as I could without leaving my work and being noticed.

X Q. 20. Have you any distinct recollection as to the month or particular time when this interview took place?

A. I can't give the date. It was near the last of December; am not positive it was in December, but think it was.

X Q. 21. Do you remember of any one else being at work in this room at this time?

A. I think the only persons working in the room were Mr. Clark, Mr. Garretson, and myself. There was no one else in the room, unless some one else passed through the room.

X Q. 22. Was not Joel G. Garretson and Cyrus Garretson working in this room while you were working on the model of the vise you have referred to, or blind butt?

A. At this time I have no recollection of any person being at work there except those I have mentioned. There were, however, persons working on wire-work in this same room previous and subsequent to this transaction. Joel Garretson came some time after this. I am not certain, but think he came near New Year's Day, 1866. I don't recollect when Cyrus came, but think Joel came first. Before I finished the model of the vise they did come there to work; at least before I left that employment, which was but a few days after finishing the vise.

X Q. 23. Do you know what became of the sketch you first referred to?

A. I do not. I never saw it afterwards.

X Q. 24. Do you recollect at this time that this first sketch you saw represented the nut as connected in any way to the yoke or collar to which the binder was attached?

A. I don't recollect how it was connected, except that the nut carried the collar. I think it was the same in that respect as the drawing I saw afterwards.

X Q. 25. How do you know that this sketch represented the nut as carrying the collar, or as being secured to it in any way?

A. By overhearing the conversation between Mr. Clark and Mr. Garretson.

X Q. 26. Then you do not know that the sketch represented the collar and nut as connected, except from what you inferred from the conversation between Clark and Garretson?

A. I know from the construction of the other parts of the device that

the nut must carry the collar, or be in some way connected with it so as to carry it.

X Q. 27. When was your attention first recalled to this interview that you have described?

A. I don't know. It might have been a thousand times. I have not given it serious thought till lately—since about six weeks ago, when I was asked if I remembered anything about it by Mr. Clark.

111 X Q. 28. Did not Mr. Clark at that time state his recollections of the interview you have referred to, and of what took place?

A. He did not.

X Q. 29. Are you willing to swear that you distinctly recollect that the sketch, at the time you saw it, represented the wire or binder as connecting with the yoke or collar in the manner shown in Exhibit F, instead of from the opposite side?

A. I am.

X Q. 30. Where did Mr. Clark make these alterations to the sketch that you say he made in the shop before showing it to Mr. Garretson?

A. At the side bench, near the corner of the room, between me and Mr. Garretson.

X Q. 31. Was Mr. Garretson in the room when Mr. Clark came there at this time?

A. I don't recollect; I think he was.

X Q. 32. Might not Mr. Clark and Mr. Garretson have had some conversation at the shop at the time you refer to, before Mr. Clark made these alterations in the sketch?

A. Not that I know of; I judged from the manner in which Mr. Clark addressed Mr. Garretson that that was the first time the matter had been talked of between them at all.

X Q. 33. Did you see Mr. Clark when he first entered the room on the occasion you refer to?

A. I think so.

X Q. 34. Do you recollect whether he had any paper in his hand when he entered the room?

A. I do not.

X Q. 35. Did you see this paper on which the sketch was made when Clark first entered the room, so as to know whether there was any sketch of a mop-head upon it or not?

A. I didn't see it clearly; there was something on it.

X Q. 36. Will you swear that this interview you have described did not take place as late as January, 1866?

A. I am unable to give the date, as I have already stated.

X Q. 37. What was it that caused you to give such particular attention to what took place between Mr. Clark and Mr. Garretson at the time you referred to?

A. I had been studying upon a mop, having been previously advised to invent a mop.

X Q. 38. Do you recollect distinctly anything that was said by Mr. Clark or Mr. Garretson on this occasion in respect to improvements in mop-heads?

A. Very little; I have a distinct recollection of a very little of it.

The witness, on reading over the evidence, desires to say that he is not

certain that Joel and Cyrus Garretson had not come to the shop before the time of this interview between Garretson and Clark. But they are not associated in his recollection with the transaction at all.

X Q. 39. When and where did you first see the second or more finished drawings you have referred to?

112 A. In the same room, produced by Mr. Clark, at nearly the same position as the first sketch; I think it was on the following morning—the following day some time; it might not have been so soon.

X Q. 40. Where in the shop and in whose hands did you first see it?

A. I saw it rolled up in Mr. Clark's hands, as he entered the room and enquired for Mr. Garretson; I saw the roll. Mr. Clark went to look for Mr. Garretson and soon returned with him, unrolled the paper and placed it on the bench in a similar position to that in which he had previously shown his sketch. I was at my bench and saw it, unless I might have been standing by the stove; it was a very cold morning.

X Q. 41. Did Mr. Clark or Garretson call your attention to this drawing at this time?

A. I think not; I think they tried to conceal it from me.

X Q. 42. Did you, at the time of the first interview you have described between Mr. Clark and Garretson, hear any remarks or allusions made to the mop-head previously patented by Corydon Karr, managing director of the Townsend Manufacturing Co.?

A. Allusions were made to some mop; I don't know what one; I think more than one mop was alluded to.

X Q. 43. In studying upon the mop as you have testified to did you have in mind or consider the mop-head invented by Corydon Karr?

A. I did not; I did not know he had invented any.

On being re-examined the witness said:

Q. 44. What was the length of this work-bench at which you worked?

A. I don't recollect whether it ran clear across the front of the room or not; the room was the width of a store—the width of the store the Townsend Manufacturing Company then occupied—about eighteen feet, I should judge.

Q. 45. How near to you was Mr. Garretson when he was at work?

A. It seems to me he was at work most of the time right behind me, at a bench in the middle of the room, and within reach of me; I think I could reach him from where I stood; my recollection is very indistinct as to the position of the benches in the room; I think he was at a side bench when these drawings were shown.

ALBERT STORER.

Examination taken, reduced to writing, read over to the witness, and by him subscribed, and sworn before me this 19th day of December, 1874.

GEO. J. SICARD, *Examiner.*

CHARLES B. CLARK, recalled and sworn for defendants, testified:

Q. 1. State whether or not at the interviews between you and Garretson, testified to by Storer, when the sketch or the drawing described by you and by Mr. Storer was shown, there was present Cyrus Garretson or Joel G. Garretson, or any other person except Mr. Storer.

(Objected to, as witness has not stated that he had more than one interview with Garretson when Storer was present.)

113 A. At the interviews mentioned neither Cyrus Garretson nor Joel G. Garretson was present. The only persons present were Oliver S. Garretson, Albert Storer, and myself.

On being cross-examined the witness said, in answer to complainant's counsel:

X Q. 1. Did you ever act as solicitor or agent for obtaining patents for any person or persons?

(Objected to as not a proper cross-examination.)

A. I do not remember having done so.

X Q. 2. Did you ever make application for patent as agent for Davis Harvey?

(Same objection as before.)

A. No; except with assistance, and by direction of another person.

X Q. 3. Did not Mr. Harvey apply to you to assist in preparing or to prepare the papers to get a patent?

A. He did, according to my best recollection.

X Q. 4. After he had so applied to you, and had made arrangements for you to make his application, did you not afterwards make application for a patent for an improvement in fences, either alone or jointly with your brother, similar to that of Mr. Harvey; and did you not delay making application for him until you had obtained your patent?

(Objected to on same grounds as above, and as immaterial.)

A. I believe that I applied for a patent on a fence quite dissimilar to that of Davis Harvey's invention. I do not remember that Mr. Harvey's application was delayed in consequence of my application, or the application for a patent for my device.

X Q. 5. Was not Mr. Harvey's application which you had filed for him rejected on the patent which you had obtained for your invention?

(Objected to on the same grounds, and also as scurrilous; and a notice is hereby given that at the opening of the court at its next term a motion will be made to strike out this and the foregoing questions, with costs. Further objected to as not being the best evidence. The record should be produced.)

A. I do not remember that Davis Harvey's application for a patent was rejected upon my application for a patent previously made to the Patent Office.

X Q. 6. Had you not, prior to the making application for letters patent for mop-head jointly with O. S. Garretson, obtained several letters patent for various inventions of your own and for various other parties?

A. I had obtained two or three letters patent for inventions of my own, but I do not remember to have obtained letters patent for the inventions of any others.

X Q. 7. Were you not informed and advised before the time of making application for letters patent jointly with Mr. Garretson, that to be joint inventors the parties must jointly assist or must co-operate in producing the invention or particular feature claimed?

A. I was not.

114 X Q. 8. In your previous examination where you testify as to an interview with Mr. Garretson, do you refer to either of the interviews testified to by Mr. Storer to-day in your presence, from your recollection of your testimony?

A. My recollection is that I do there refer mainly to the first interview.

X Q. 9. What induced you to call on Mr. Garretson in respect to this improvement in mop-heads, which you testify you made, which forms a part of the joint patent of yourself and Mr. Garretson?

A. Mr. Garretson and myself were either in business together or expected soon to go in business together, in the ownership and management of certain window-blind hinges that were the invention of O. S. Garretson.

X Q. 10. Was this occasion you refer to the first time you and Mr. Garretson had any conversation respecting improvements in mop-heads?

A. It was.

X Q. 11. Were you at this time aware of and had you seen a sample of the mop-head patented by Corydon Karr, a copy of which patent is in evidence in this suit?

A. I had never seen a sample of Karr's mop-head up to that time mentioned.

X Q. 12. Were not samples of that mop-head in the store of the Townsend Manufacturing Company, and did you not at that time know what his invention was or what his improved mop was?

A. I do not know whether samples of said mop-heads were at that time in the store of the Townsend Manufacturing Company. I was told on that day what Karr's invention was.

X Q. 13. Did Mr. Garretson tell you on that day what the invention of Mr. Karr was?

A. He did not.

X Q. 14. Did he not allude to Mr. Karr's invention at the interview with Garretson you have last referred to?

A. He made no allusion to any mop until I had presented my invention to him, and I do not remember of his making any special or particular allusion afterwards to any mop at that interview.

X Q. 15. Did you allude to any other kinds of mop-heads than the one shown in the sketch?

A. I do not remember to have alluded to any other mop, as I was not acquainted with other mops then in use.

X Q. 16. Was the general character and design of the mop shown by the sketch different from any other mop-head you were acquainted with?

A. It was different from any mop I had ever known of.

X Q. 17. What mops were you acquainted with at that time? Give the names, or describe generally.

A. I do not know the name of any mop I was acquainted with. I had known an old-fashioned wooden mop, and I had known one other mop made of iron that I referred to in my previous testimony, and none others that I can remember of.

X Q. 18. What induced you to call on Mr. Garretson on this particular day you have referred to?

115 A. I had business with the Townsend Manufacturing Company, and was with the said firm daily; also, was in business with O. S. Garretson, as before mentioned. This was the inducement for me to show him my invention in the mop-head.

X Q. 19. What day did you complete the part of the invention you swear you made in mop-heads?

A. I cannot fix the precise date, but am quite sure that it was toward the end of the year 1865, or the forepart of the year 1866. It was completed on the day I showed it to Garretson, and before I showed it to Garretson.

X Q. 20. When did you first conceive of this invention of mop-heads—when in reference to the day of this interview?

A. Perhaps fifteen or twenty minutes, or it might be a half hour, or even an hour, probably not more, before I showed it to Garretson.

X Q. 21. Had you before this day ever seen a mop-head with the cross-head grooved to receive the wire binder?

A. I had, I believe; I had in a mop referred to in some of my previous testimony in this case.

X Q. 22. Had you prior to this day ever seen a mop-head with a cross-head having a socket for the handle cast therewith?

A. I had not.

X Q. 23. Will you swear that the sketch which you first showed to Garretson represented all of the features of construction of the mop-head, as patented by you and Garretson, excepting the mode of connecting the wire or binder to the collar?

A. I will, except in the peculiar shape of the binding wire and its manner of entering the collar or loose jaw.

X Q. 24. How long after you conceived of the invention represented by the sketch which you say you made before you commenced making the sketch?

A. It was immediately after conceiving of the design or invention.

X Q. 25. What part of the mop-head did you conceive first? State how the invention occurred to you or was suggested to you. State the order in which it occurred to you.

A. I conceived the invention referred to upon hearing James Karr and a Mr. Strong talk about mops or a mop-head at the office of the Townsend Manufacturing Company. I do not remember to have originated in my mind any particular part of the mop-head first, but it all came at once.

X Q. 26. How long were you and Mr. Garretson together when you showed him the sketch?

A. I do not remember the length of time; it was part of a day. My impression is it was part of a day, either in the forenoon or afternoon; or it might have been all day, as I was with him a very large part of the time, being in business with him.

X Q. 27. When did you make the sketch you have referred to?

A. My remembrance is that I made the sketch immediately, as I was passing from the office of the Townsend Manufacturing Company below to the room above, where Mr. Garretson and Mr. Storer were at work.

X Q. 28. Did not this first sketch contain or have added to it
116 before you separated from Mr. Garretson at the time you showed it to him the movable binder connected to the yoke or collar, as shown in the joint patent?

A. I believe not.

X Q. 29. Did not yourself and Mr. Garretson, or yourself in the presence of Mr. Garretson, after you went upstairs, make a pencil sketch of your improved mop-head, showing both improvements, and did you not use for the purpose drawing tools which Mr. Garretson had?

A. We did not. I finished sketching my device before Mr. Garretson. I did not use any drawing tools beyond a pencil, as I remember.

X Q. 30. Why was not the binding wire represented in the sketch, or added to the sketch, after that mode of connecting the wire to the collar was suggested, the same as shown in the patent?

A. I do not know.

X Q. 31. Did you not change the sketch so as to represent the mop as you and Garretson proposed to make it?

A. I did not change the sketch.

X Q. 32. Was any sketch made at this time to represent the new mode of connecting the binder to the collar; and, if so, who made it?

A. Mr. Garretson suggested making this new mode of binding wire, and made a sketch of it.

(A pencil sketch marked "Sketch, G. J. S.," is shown to witness.)

X Q. 33. Do you recognize this sketch which you have in your hand as one you have ever seen before?

A. I do not.

X Q. 34. Do you recognize any writing thereon as being your own?

A. No, sir; I don't think I do.

X Q. 35. Do you not recollect at the time of this first interview with Garretson that you have referred to that Garretson made the sketch at the left-hand upper corner, now marked by examiner "1," or assisted in making it, and that you wrote under it the words, "they cannot unlock it?"

A. I do not recollect, but I know that Garretson at the first interview never made that sketch, or assisted in making it at that interview.

X Q. 36. Do you recollect making sketch marked "1" at that interview?

A. I did not make that sketch at that interview.

X Q. 37. Will you swear that the large portion of the sketch on the lower half of the paper was not made by yourself, or yourself and Mr. Garretson, on this occasion referred to?

A. I so swear.

X Q. 38. Do you recollect any of the conversation had between you and Mr. Garretson respecting mop-heads at the time you showed him the sketch? And, if so, state what that conversation was, giving the language, so far as you are able.

A. After showing Mr. Garretson the sketch, he suggested—I can't remember the exact language—Mr. Garretson, however, said in substance, after he had looked the sketch through, and after hearing my explanation of it, that he thought he could improve the wire portion of the mop, and he proceeded to say how. He said he would carry the wire up
117 through the ends of the cross-head, bending the outer ends of the wire in the form of bows, and have them enter the yoke or collar on that side next the handle of the mop. He said it would be more compact, and he thought a better thing than the form in which I had it in my sketch.

On showing him the sketch when I first presented it to him, I said in substance to him that I had an idea for a mop-head. I considered it a good one; then showed him the sketch, and afterwards he suggested as I have said. We consented mutually to adopt his form of binding, and agreed to make a drawing of the new mop that we had adopted by using his binding wire.

X Q. 39. Was nothing further said or done at that time, or any suggestions made by Mr. Garretson as to the size, form, construction of the parts of the mop-head, other than as shown by your sketch?

A. Substantially there was not, other than the form of the binding wire.

On being re-examined the witness said:

Q. 40. Under whose direction were you acting, and who was the principal person applying for the patent in the case of Davis Harvey, to which reference has been made?

A. I was acting under the direction of one John Garretson, of Salem, Iowa, the father of Oliver S. Garretson, but think I was the only one known to Mr. Harvey as the applicant.

CHARLES B. CLARK.

Examination taken, reduced to writing, read over to the witness, and by him subscribed before me this 19th day of December, A. D. 1874.

GEO. J. SICARD, *Examiner.*

(Endorsed:) Filed Jan'y 21, 1875.

118 DEFENDANTS' EXHIBIT MERRICK.—R. E. S., *Ex'r.*

The U. S. Patent Office to all to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Solyman Merrick, dated August 15th, 1848, No. 5707, for imp't in screw wrenches.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of August, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.]

J. M. THACHER,
Acting Commissioner.

119 No. 5707.

The United States of America to all to whom these letters patent shall come:

Whereas Solyman Merrick, Springfield, Massachusetts, has alleged that he has invented a new and useful improvement in screw wrenches, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath , to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Solyman Merrick, his heirs, administrators or assigns, for the term of fourteen years

from the fifteenth day of August, one thousand eight hundred and forty-eight, the full and exclusive right and liberty of making, construct-

(Here follows diagram marked page 120.)

121 ing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Solyman Merrick in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office has been hereunto affixed.

Given under my hand at the city of Washington this fifteenth day of August, in the year of our Lord one thousand eight hundred and forty-eight, and of the Independence of the United States of America the seventy-third.

JAMES BUCHANAN,
Secretary of State.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] EDMUND BURKE,
Commissioner of Patents.

122 The schedule referred to in these letters patent, and making part of the same.

To all persons to whom these presents shall come:

Be it known that I, Solyman Merrick, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful improvement in the screw wrench; and I do hereby declare that the same is fully represented and described in the following specification and accompanying drawings, letters, figures, and references thereof.

Figure 3 is a horizontal or transverse section of the projecting-arm H and the shank C, to be hereinafter mentioned.

Of the said drawings, Figure 1 denotes a side elevation of my improved screw wrench. Figure 2 is a central and vertical section of the same.

In said drawings A exhibits the stationary hammer jaw, B the movable jaw, C the shank on which the jaw B slides, E the screw of shank, F the handle, G the movable screw-nut connected to the movable jaw B by an extension or projecting-arm, H.

By revolving the nut G on the screw E the movable jaw B is made to advance towards or depart from the fixed jaw A, in accordance with the direction in which said nut is revolved.

The contiguous faces, *a*, *b*, *c*, *d*, of the two jaws are not made parallel to each other as in other screw wrenches, but when the two jaws are brought together, so as to touch, make an angle with each other. One of the said faces is made rough, or with indents or teeth, while the other is left smooth or without any such roughness or teeth, as seen in the drawings. The object of this mode of making the faces of the jaws is to enable them to act on cylindrical nuts or surfaces, the ordinary kinds of screw wrenches being only adapted to square or prismatic nuts. If we place a cylindrical nut between the two jaws, as represented by the dotted circle *e* in Figure 1, and turn the wrench in the direction denoted by the

arrow *f*, we shall find that the teeth on the face *a b* in contact with the nut will prevent said face from slipping on the nut, and by so doing will cause the other face, *c d*, to slip on the nut in such manner as to draw the nut closer into the jaws or towards the line *a c*, and thus cause the jaws to take a firm hold of it. The faces of the jaws may be made to
123 flare in an opposite direction, and produce a similar effect when the wrench is turned in an opposite direction—that is to say, the two faces may be so arranged that they may be nearer to one another at the extremities *b d* than they are at the extremities *a c*.

The next part of my invention consists in the manner in which I combine the nut G and projection or arm H with one another and with the screw E and shank C. For this purpose I do not extend the arm H through the nut G, as represented in Figure 4, nor do I connect it to the nut by a strap or band, I, made to rest in a groove made in the nut, as seen in Figure 5; but just above the screw of the nut I form a cylindrical chamber, *i i*, around the screw, as seen in Figure 2, and around the side of said chamber I turn or make a groove, *n*, for the purpose of receiving a projection, *o*, extending from the arm H, as seen in said Figure 2, the lower part of said arm being introduced into the chamber *i i*, as seen in the figure.

By this method of adapting the nut and arm to one another, the former is made to operate with much less friction or bind than it does when said parts are conjoined, as represented in Figures 4 and 5. Besides this, there are other advantages in the same. In order to steady the movements of the movable jaw I affix to the arm H two side plates or projections, *o o'*, as seen in Figures 1 and 3. They are made to project from the said arm and a short distance over the sides of the shank.

What I claim in the above-described improved screw wrench, and for the purpose of rendering it available in turning cylindrical nuts or other articles, is the within-specified manner of making and arranging the contiguous binding faces, *a*, *b*, *c*, *d*, of the jaws, the same consisting—

1st. In making them not parallel to each other, but so as to form an angle when the jaws are brought in conjunction or close down upon one another.

2d. In roughening one of the faces or forming it with teeth, and making the other smooth, as described.

In testimony whereof, I have hereto set my signature this twenty-ninth day of March, A. D., 1848.

SOLYMAN MERRICK.

Witnesses:
HENRY FOX.
HOMER FOOT.
Ex'd: C. A. D.

124 DEFENDANTS' EXHIBIT BRIGGS.—R. E. S., *Ex'r.*

The U. S. Patent Office, to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Albert D. Briggs, dated April 26th, 1859, No. 23751, for improved screw wrench.

In testimony whereof I, M. D. Leggett, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventh day of July, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.] M. D. LEGGETT,
Commissioner.

125 No. 23751.

The United States of America to all to whom these letters patent shall come, :

Whereas Albert D. Briggs, of Springfield, Massachusetts, has alleged that he has invented a new and useful improved screw wrench which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said wrench, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said wrench, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Albert D. Briggs, his heirs, administrators, or assigns, for the term of fourteen years from the twenty-sixth day of April, one thousand eight hundred and fifty-nine, the full and exclusive right and liberty of making, construct-

(Here follows diagram marked page 126.)

127 ing, using, and vending to others to be used, the said wrench, a description whereof is given in the words of the said Albert D. Briggs, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-sixth day of April, in the year of our Lord one thousand eight hundred and fifty-nine, and of the Independence of the United States of America the eighty-third.

JACOB THOMPSON,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] S. T. SHUGERT,
Act'g Commissioner of Patents.

128 The schedule referred to in these letters patent, and making part of the same.

To all persons to whom these presents shall come:

Be it known that I, Albert D. Briggs, of Springfield, in the county of

Hampden and State of Massachusetts, have invented a new and useful improvement in screw wrenches; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 denotes a side elevation; and

Figure 2 a longitudinal section of a screw wrench containing my invention.

My invention or improvement has reference to the wrench for which letters patent were granted on the seventeenth day of August, A. D. 1835, to Solyman Merrick. It will also apply to various other wrenches, wherein the sliding jaw is moved by a rotary screw-nut working on a male screw cut or formed on the main bar carrying the stationary jaw of the wrench.

The nature of my invention or improvement consists in the application of a sleeve or tube to the screw-nut and to the handle of the wrench, so as to encompass the handle and project from the screw-nut in manner so as to enable a person, while grasping the handle in one hand, to lay hold of the sleeve with the same hand and revolve the same about the handle in such a way as to cause the rotation of the nut, and a movement of the sleeve and the movable jaw either towards or away from the stationary jaw, whatever may be the distance of the movable from the stationary pan, in the range of its motion on the main bar.

In rotating the nut of the above-mentioned wrench of the said Merrick by the hand by which its handle may be grasped, much inconvenience will generally be experienced, particularly when the sliding jaw is very near the stationary one; and furthermore, the nut is so short as to render it difficult, if not impossible, for it to be seized and grasped in the palm of a person's hand, should he desire to employ such in rotating the nut. By my invention or improvement, while the handle is grasped in one hand, the sleeve may be grasped in the palm and by the fingers of the
129 other, and be rotated thereby; and this, with its other advantages, renders my invention specially useful and important.

In the drawings, A denotes the main bar, having a stationary jaw, C, at its upper end, and screw-heads, B B, formed on its opposite edges. The shank of the bar extends into and is fixed in the handle D.

E is the movable or sliding jaw, which engages with a screw-nut, F, which envelopes the shank-bar A, and screws upon the screw-threads.

G is the tube or sleeve which encompasses the handle and extends from the nut F, to which it is fastened; or it may be formed in one piece of metal with the nut. This sleeve, in length, may be about one-half of the handle, and may have its outer surface scored or grooved, or otherwise made rough, so as to enable the fingers or hand of a person to hold to it without slipping around on it. In general, the sleeve should be long enough to cover the upper end of the handle and that part of the screw B B which may be between the sleeve and the nut when the two jaws are in contact with one another. Under such circumstances, the sleeve will not only serve to protect the screw from dirt or dust, but will enable a person to revolve the nut with the thumb and forefinger of his hand that may be grasping the handle, and to do this at whatever distance the jaws may be apart.

It will readily be seen that in case it may be desirable to obtain a very

firm grasp on a nut, or anything else which may be interposed between the jaws, the sleeve will afford the means of so doing, as it may be grasped and rotated by one hand, while the other may have hold of the handle.

I make no claim to a nut and screw applied to the movable jaw and main bar of a wrench, and for the purpose of operating or moving the said jaw relatively to the stationary jaw; nor do I claim the invention or improvement which constitutes the subject of the said patent of the said Merrick; nor do I claim the mode of operating the movable jaw as shown in the patent of D. H. Chamberlain, dated March 20, 1849, wherein the tubular handle has a screw formed within it, and rotates on the shank without having any longitudinal motion thereof; and furthermore, such rotary handle is not a separate and distinct thing with reference to the handle G, as hereinbefore described as appertaining to my improved wrench.

There are important differences between my improvement and the other inventions, as hereinbefore cited.

What, therefore, I claim, is the application of the sleeve G to the nut F and the handle D, so as not only to be capable of turning with and rotating the nut, but of moving longitudinally on the handle and with the nut, in accordance with the movement of the movable jaw E on the shank A.

A. D. BRIGGS.

Witnesses:

R. F. HAWKINS.

A. L. SOULE.

Ex.: J. A. W.

130 DEF'TS' PARK EXHIBIT.—R. E. S., *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted A. W. Park and C. J. Winters, assignees of A. W. Park, dated May 30th, 1868, for imp't in tools.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this second day of December, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.] ELLIS SPEAR, *Acting Commissioner.*

131 No. 48027.

The United States of America to all to whom these letters patent shall come:

Whereas A. W. Park, of Norwich, Connecticut, has alleged that he has invented a new and useful improvement in tools (he having assigned his right, title, and interest in said improvement to himself and C. J. Winters, of the same place), which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the

Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Park and Winters, their heirs, administrators, or assigns, for the term of seven-
132 teen years from the thirtieth day of May, one thousand eight hundred and sixty-five, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said A. W. Park, in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this thirtieth day of May, in the year of our Lord one thousand eight hundred and sixty-five, and of the Independence of the United States of America the eighty-ninth.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

(Here follows diagram marked page 133.)

134 The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, A. W. Park, of Norwich, in the county of New London and State of Connecticut, have invented a new and useful improvement in tools and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 represents a combination of several tools made according to my invention, the lower part of the handle being shown in section.

Figure 2 is an end view of the handle.

Similar letters of reference indicate like parts.

This invention consists in a combination, in a peculiar manner, of several different tools, so as to join in the same implement a hammer, a claw, a screw-driver a socket-wrench and a monkey-wrench, the whole implement consisting of only two pieces and a nut, by which said pieces are connected to and adjusted with each other.

B is a shank, composed of a rectangular part, *e*, a screw-threaded part, *f*, and a wedge-shaped end, which is formed into a screw-driver, C. The upper end of the shank B carries a claw, E, and a face, F, the latter serving the purpose of the upper face of a monkey-wrench as hereinafter explained. The claw E and face F are parts of the same piece of metal, which piece is secured at right angles to the upper end of the shank B.

D is a hammer, having a toe, F, at its end with a straight face, which ex-

tends in a line parallel with the face F before mentioned. The handle A of the hammer consists of two straight bars, *d d*, which extend respectively from before and behind the edge of the hammer for a distance rather exceeding one-half the length of the handle, and a tubular part, *e*.

The straight bars *d d* are separated from the part *e* by cross bars, *a*, which extend across from edge to edge of the bars *d* on both sides of the handle, only one of said cross-bars, *a*, being seen in the drawing and below said bars by swells, *b b*, which terminate in the sides of the tubular part, *e*, and which are formed by expanding the bars *d d* below the cross-bars. The upper end of the tubular part *e* of the handle is contracted at *g g*, so as to form shoulders which are parallel with the cross-bars *a* above.

I is a nut which works in the open space bounded by the bars *a*, the shoulders *g g*, and the expanded sides *b b*. The shank B is inserted through the eye of the hammer, its screw-thread part, *f*, passing between the cross-bars *a*, through the nut I, and between the shoulders *g g*; when the shank is screwed down so as to bring the faces F F together the plane part *e* will be flush with the edges of the bars *d d*, thus giving smoothness to that part of the handle.

The lower end of the tubular part *e* of the handle is contracted, and its inner sides are formed into a socket-wrench as represented in Figure 2. The part *f* of shank B has a double screw-thread cut thereon for the purpose of securing a rapid movement of the handle through the nut I, and at the same time giving strength to the handle and steadiness to it when in motion.

When it is desired to use this implement as a socket-wrench, the hammer and claw parts serve as a convenient handle for operating it; when it is desired to use it as a hammer the claw part may be slightly separated from the hammer, as shown in Figure 1, or the two may be together, without thereby preventing the proper use of the hammer. When it is to be used as a claw the part E should be separated from the hammer a little. When it is to be used as a monkey-wrench the claw and hammer are separated so as to bring the faces F F a suitable distance apart to suit the bolt head or nut to be turned. When it is to be used as a screw-driver the shank B is withdrawn entirely from the handle A.

A double thread is also formed in the nut I, to fit the thread of the shank.

Having thus described my invention, I claim as new and desire to secure by letters patent—

The implement above shown, comprising a combined hammer, claw, monkey-wrench, socket-wrench, and screw-driver, substantially as described.

A. W. PARK.

Witnesses,
DAN YOUNG,
DENNISON CHAPLIN.
Ex'd: M. M. M.

136 DEF'TS' BOARDMAN EXHIBIT.—R. E. S., *c'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted B. Boardman, dated July 10th, 1866, No. 56166, for improved tool.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this second day of December, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.] ELLIS SPEAR,
Acting Commissioner.

137 No. 56166.

The United States of America to all to whom these letters patent shall come:

Whereas Byron Boardman, of Norwich, Connecticut, has alleged that he has invented a new and useful improved tool which he states has not been known or used before his application; has made oath that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used, has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said invention, and praying that a patent may be granted for that purpose.

These are therefore to grant, according to law, to the said Byron Boardman, his heirs, administrators, or assigns, for the term of seventeen years from the tenth day of July, one thousand eight hundred and sixty-
138 six, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the words of the said Byron Boardman in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office to be hereunto affixed. Given under my hand at the city of Washington, this tenth day of July, in the year of our Lord one thousand eight hundred and sixty-six, and of the Independence of the United States of America the seventy-first.

JAMES HARLAN,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] THOMAS HARLAND,
Acting Commissioner of Patents.

(Here follows diagram marked page 139.)

140 The schedule referred to in these letters patent, and making part of the same.

To all whom it may concern:

Be it known that I, Byron Boardman, of Norwich, in the county of New London and State of Connecticut, have invented an improved combination tool, and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which,

Figure 1 is a view of one side of the improved tool.

Figure 2 is a longitudinal section taken centrally through the same.

Figure 3 is a view of the claw, claw-handle and its screw-driver detached.

Figure 4 is an end view of the handle of the tool, showing the socket wrench.

Figure 5 is a perspective view of the tool complete.

Figure 6 is an enlarged view showing the manner of attaching the adjusting nut to its handle.

Figures 7 and 8 show two forms of steel cams for the pipe wrench.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to combine a pipe wrench with a monkey-wrench in such manner that two of the jaws of the latter shall serve as griping jaws for firmly holding rods or pipes of varying diameters which it may be desired to turn.

Another object of my invention is to combine a screw-driver with the stem or shank of the movable jaw of the monkey-wrench, and with such combination to so apply the adjusting nut for said jaw permanently to its handle that it shall not drop out of place when the screw-driver is withdrawn for use.

Another object of my invention is to apply a screw-driver bit to the stem or shank of the movable jaw, which is made of comparatively soft metal, all as will be hereinafter described.

To enable others skilled in the art to understand my invention I will describe its construction and operation.

141 In the accompanying drawing A represents the handle of the tool, which is cast hollow, with a rectangular socket, *a*, in one end that serves as a nut wrench. This handle has two parallel bars, B B, formed on it, which terminate in a head, C, one end, *b*, of which forms one of the jaws of the monkey-wrench and the opposite end forms a hammer, *c*. The movable jaw *b'* is formed on a rectangular shank, C', and on the opposite and of this jaw *b'* is a claw, *d*, for drawing nails. The shank C' has a male screw, *e*, formed on it, which passes through a nut, *g*, and enters the hollow handle A, when the parts of the tool are together. That end of the screw portion of said shank which enters the handle of the tool is slotted transversely for the purpose of receiving a steel screw bit, *h*, that is held firmly in place by the rivet *h'*, as shown in figure 2. This admits of the shank C', with its T head claw and jaw being used as a screw-driver when detached from the other portion of the tool; and as it is necessary to detach the parts above mentioned when the screw-driver is used it is important that the nut *g* should be permanently attached to the handle.

To this end a recess, *i*, is formed in the handle, which will admit the nut through one side only, the opposite side, or opening, being narrower than the diameter of the nut, as I have shown in figure 6. When the nut *g* is dropped into its recess, *i*, a pin, *j*, is passed through the solid metal at one end of said recess, so as to enter an annular groove in the periphery of the nut, and as this pin is nearest that side of the handle where the recess is the largest it will prevent the nut from dropping out of its place, yet allow it to be rotated freely.

The object of securing the bit *h* to the end of the shank C′, rather than forming a bit on this shank, is to enable me to make the shank of cast metal, and to have a more durable and stronger bit than could be made of cast metal.

Just at the junction of the claw *d* with the shank C′ I form a curved recess, as shown in figure 2, within which is loosely fitted a steel or other hard-metal jaw or cam, *n*, having either a concave serrated or a convex serrated biting edge.

This cam *n* is connected to the claw-head by means of a pin, or otherwise so as to allow the cam to roll or move loosely, and take a firm bite upon a pipe, which is held against it by the hammer head, as indicated in figure 5.

The cam is also made to work loosely about its pivot pin or pins, for the purpose of allowing it to seek a firm bearing against the curved surface of its recess.

By this arrangement there will be no joints or pins to bear the strain upon the cam, and to break or give under the great pressure to which the cam is subjected in grasping cylindrical objects.

Instead of applying the cam *n* to the claw jaw of the wrench, it may be applied to the hammer head, or, if desirable, two cams may be used and applied to the movable and fixed jaws.

142 Having thus described my invention, what I claim as new, and desire to secure by letters patent as an improvement in monkey-wrenches, is—

1st. The combination of a cam, *n*, with the movable or fixed jaw-head of a monkey-wrench, so applied as to form thereof a pipe wrench, substantially as described.

2nd. The manner herein described of securing the pipe-wrench cam within a recess, so that this cam will be firmly sustained by the solid metal surrounding it during the operation of turning a cylindrical object, and allowed to play loosely when released, substantially as described.

3rd. Securing the nut *g* within an oblong slot, *i*, in the handle A by means of the fixed pin *j*, substantially as described.

4th. The combination of the permanently attached nut *g* and the screw-driver bit *h* formed on or applied to the shank *c′* of a monkey-wrench, substantially as described.

5th. Securing a steel bit, *h*, to the end of the softer metal shank *c*, of the monkey-wrench, substantially as described.

BYRON BOARDMAN.

Witnesses:

JAMES BOARDMAN.

GEO. G. BOLTON.

Ex'd: J. R.

143 DEF'TS' EXHIBIT GRAY AND ADAMS.—R. E. S., *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper, contents, and drawing in the matter of letters patent granted R. H. Gray and S. Abrams, assignees of R. H. Gray, dated September 25th, 1866, No. 58342, for imp't in lifting and pressing screws.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fifteenth day of September, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.] J. M. THACHER,
Acting Commissioner.

144 [50. R. H. G. VIII 27, 1866. 50.]

Petition.

To the Commissioner of Patents:

The petition of Richard H. Gray, of Greenville, Butler County, State of Alabama, respectfully represents:

That your petitioner has invented a new and useful improvement in lifting and pressing screws for pressing or lifting cotton and other substances, which he verily believes has never before been known or used prior to the invention thereof by your petitioner. He therefore prays that letters patent of the United States may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same upon the terms and condition expressed in the act of Congress in that case made and provided, he having paid fifteen dollars into the Treasury and complied with the other provisions of the said act. Your petitioner would further pray that Joseph C. Clayton be recognized as his sole lawful solicitor and advocate for him and in his name, to solicite and advocate, amend or withdraw this application, to receive the patent if granted, and
145 in all other respects to do all your petitioner could do if personally acting in the premises.

RICHARD H. GRAY.

(Here follows diagram marked page 146.)

147 *Specification.*

To all whom it may concern:

Be it known that I, Richard H. Gray, of Greenville, in the county of Butler and in the State of Alabama, have invented a new and useful improvement in the construction and operation of lifting and pressing screws for pressing or lifting cotton or other substances; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings forming a part of this specification.

In the drawings—

Fig. 1 shows my improvement applied to use as a cotton-press.

Fig. 2 is a vertical section showing the construction and operation of my invention.

148 Fig. 3 is a horizontal section of the same.

Fig. 4 is a section through C D.

The nature of my invention consists in the mode of constructing and applying an anti-friction revolving nut to a screw intended to press or lift.

My invention is more particularly adapted to the construction of a cheap and strong cast-iron screw-power press for hay and cotton.

In the drawings—

A represents the general framework of the press, and is made of heavy timber suitably put together.

B is the screw which, in a cotton-press, should be made about six inches in diameter and be cast as desired, with a follower block, *b*, at the foot, the said block being about ten by twelve inches and two inches thick. The main follower block C, made of heavy timber and the size of a bale of cotton, is bolted to the iron block *b*.

D is the hollow revolving nut, made of cast-iron of sufficient size and length to receive the screw B, and is about twenty inches deep, so as to act as a strong and steady guide to the screw. The upper part of the nut is cast square, about fourteen by eighteen inches, having flanges, *c c*, between which the operating lever L is fastened.

At the lower end of the hollow nut is cast a flange, E, so as to form the circular cup G, which should have a bottom of about an inch in thickness. In this cup are arranged a number of friction balls, just touching each and about sixteen in number.

H is the cast collar in which the nut D revolves. This collar is cast in two vertical sections, so as to fit snugly to the nut, and is hexagonal on the outside, so that it cannot turn in its framing of heavy timbers. At the upper end of the collar is a flange, *e*, to correspond to flange *d* of the nut; on the lower end of the collar is a broad flange, *f*, about twelve inches lower than the flange *e*. The timbers which hold the collar are fitted up against these flanges. Extending downward from flange *f* is a flange, *i*, which fits down within flange E, so as to form a close chamber out of the cup G, in which the friction balls I are confined.

As the pressure of the screw against its nut is upward, the bottom of the cup G will press against the friction balls, which so easily turn against the flange *f* of the collar as to avoid most of the friction.

I have shown my invention applied to the hay or cotton press; by a simple inversion of construction it can be applied to machines used for lifting heavy weights.

I am aware that friction balls have heretofore been used, and therefore do not broadly claim them; but what I do claim as my invention, and desire to secure by letters patent, is—

The combination and arrangement of the cast-iron screw B *b* and cast hollow nut D, provided with cup G, with the two-part cast collar
149 H, provided with flanges, *f* and *i*, the whole being constructed and operating with friction balls I, in the manner and for the purpose set forth.

In testimony that I claim the above-described invention I have hereunto signed my name this 27th day of August, 1866.

RICHARD H. GRAY.

Witnesses:
JNO. H. MCCUTCHEN.
JO. C. CLAYTON.

Oath.

WASHINGTON CITY,
County of Washington, District of Columbia, ss:

On this 27th day of August, 1866, before me, the subscriber, duly qu'lified to administer oaths, personally appeared the within-named Richard H. Gray, and made solemn oath that he verily believes himself to be the original and first inventor of the within-described mode of constructing and operating pressing and lifting screws, and that he does not know or believe that the same was ever before known or used, and that he is a citizen of the United States, he having first affixed his name to the annexed petition and specification.

[L. S.] JOHN H. McCUTCHEN,
Notary Public.

Rev. stamp:
5. 5.
J. H. McC.,
Aug. 27, 1866.
5. 5.

(Endorsed:) 1866. Richard H. Gray. Application for a patent for pressing & lifting screws. Rec'd & filed Sept. 7, 1866.

Memorandum of fee paid at U. S. Patent Office.

Inventor, R. H. Gray. Invention, lifting & pressing screws. Date of payment, Sept. 10, 1866. 2nd fee, $20. Solicitor, J. C. Clayton, pat. law., Washington, D. C., Sept. 10, 1866.

3717.] 1866. [No. 58342.

Richard H. Gray, ass'or to self and S. Abrams, of same place, of Greenville, county of Butler, State of Alabama.

Lifting & pressing screws, &c.

Rec'd Sept. 7, 1866.
Petition, " " "
Affidavit, " " "
Specification, " " "
Drawings, " " "
Model, " " "
Cert. dep.
Cash, $15, Sept. 7, 1866.
Add'l fee cert.
1 " " cash, $20, Sept. 10, '66.

Examined Sept. 8, '66. Connally.
2 issue, A. M. Stout, Sept. 10, 1866.
Patented Sept. 25, 1866, &
Recorded vol. 206, p. 310.
Circular.

J. C. CLAYTON, *Present.*

Ex'd: M. P. H. 1866.

150 DEF'TS' RANDLETT EXHIBIT.—R. E. S., *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted T. Randlett, dated November 15th, 1853, No. 10237, for imp't in mop-heads.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-ninth day of August, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.] J. M. THACHER,
Acting Commissioner.

1866. Improvements in lifting & pressing screws. 1866.

151 No. 10237.

The United States of America to all to whom these letters patent shall come:

Whereas Timothy Randlett, of Enfield, N. H., has alleged that he has invented a new and useful improvement in mop-heads, which he states has not been known or used before his application; has made affirmation that he is a citizen of the United States, that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Timothy Randlett, his heirs, administrators, or assigns, for the term of fourteen years from the fifteenth day of November, one thousand eight hundred
152 and fifty-three, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said improvement, a description whereof is given in the words of the said Randlett in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this fifteenth day of November, in the year of our Lord one thousand eight hundred and fifty-three, and of the Independence of the United States of America the seventy-eighth.

ROBERT McCLELLAND,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] C. MASON,
Commissioner of Patents.

(Here follows diagram marked page 153.)

154 The schedule referred to in these letters patent and making part of the same.

To all to whom it may concern:

Be it known that I, Timothy Randlett, of (Shaker Village) Enfield, in the county of Grafton, and State of New Hampshire, have invented a new and improved mop-head; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making part of this specification.

Fig. 1 being a side view of the mop-head, Fig. 2 an edge view thereof, Fig. 3 a section through the center, Figs. 4 & 6 views of parts detached, and Fig. 5 view in isometrical projection of a part detached.

Like letters designate corresponding parts in all the figures.

A cross-head, B, is secured by a socket, *a*, upon the end of the mop-handle A, and in the lower edge and around the ends thereof is formed a groove, *b*, in which fits a binder, D, that terminates in a ring, E, surrounding the handle. A narrow ridge or projection, *d*, is formed longitudinally upon one side of the socket *a*, between which projection and the ring E of the binder is situated an annular tightener, C, constructed as follows: It fits closely, but so as to move freely on the handle A or socket *a*, and is provided with a groove, *f* (Figs. 4 & 5), on its inside, into which the projection *d* slides, to allow it to be pushed down to the cross-head B, in order that the binder may be separated from the cross-head for inserting the cloth between them.

The lower edge of the tightener is formed into a series of scollops or curved steps, *e e*, &c., arranged in a spiral direction, as shown in Fig. 1.

155 By raising the tightener above the ridge *d*, and then turning it in the direction indicated by the arrow, the binder will be gradually brought nearer the cross-head B, by the action of the said ridge against said tightener (as shown most distinctly in Fig 6), until a scollop is reached which will hold the cloth fast. When the cloth is to be removed the tightener is turned in the opposite direction till the grove is brought over the ridge *d*.

Having thus fully described my improved mop-head, what I claim therein as new and desire to secure by letters patent is the binder D and revolving tightener C, combined with and embracing the united cross-head B, the socket *a*, and ridge *d*, substantially in the manner and for the purpose herein set forth.

The above specification of my improved mop-head signed this sixth day of April, 1853.

TIMOTHY RANDLETT. [SEAL.]

Witnesses:
E. J. DURANT.
A. H. CRAGIN.
Ex'd: I. R.

156 DEF'TS' HOMES EXHIBIT.—R. E. S., *ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Nelson Homes, dated May 9th, 1865, No. 47642, for imp'd mop-head.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of August, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.]

J. M. THACHER,
Acting Commissioner.

157 No. 47642.

The United States of America to all to whom these letters patent shall come:

Whereas Nelson Homes, of Laona, New York, has alleged that he has invented a new and useful improved mop-head, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said invention, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Nelson Homes, his heirs, administrators, or assigns, for the term of seventeen years from the ninth day of May, one thousand eight hundred and sixty-five, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention, a description whereof
158 is given in the words of the said Nelson Homes in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this ninth day of May, in the year of our Lord one thousand eight hundred and sixty-five, and of the Independence of the United States of America the eighty-ninth.

J. P. USHER,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.]

D. P. HALOWAY,
Commissioner of Patents.

159 The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Nelson Homes, of Laona, in the county of Chautauqua and State of New York, have invented a new and improved mop-head; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side view of my invention.

Figure 2 a side view of the same, partly in section.

Figure 3 a horizontal section of the same taken in the line *x x*, figure 2.

Similar letters of reference indicate like parts.

This invention relates to new and improved means for moving the adjustable bar or jaw of the mop-head, whereby the same may be readily moved for securing the mop in the head and releasing it therefrom, and at the same time prevented from moving casually.

(Here follows diagram marked page 160.)

161 A represents the fixed jaw or portion of the mop-head, which may be described as a bar forming three sides of a quadrangle, and two arms, *a a*, which are secured in a cross-bar, *b*, on a nut, B, in which a screw, C, works; said screw being at one end of a socket, D, in which the wooden handle E of the mop-head is fitted.

The outer part of the screw C, or rather the rod on which the screw is cut or formed, is prolonged and of less diameter than the screw, as shown at F, in Figure 2, and on this part F there is fitted a sleeve, G, within which and around F a spiral spring, H, is placed, said spring having a tendency to keep the outer end of the sleeve G, which is provided with ratchet teeth, *e*, pressed against similar teeth, *d*, at the inner side of the movable or adjustable jaw I, through which a journal, *c*, at the outer end of F, passes centrally, said journal having a head, *f*, at its outer end to retain the jaw upon it. The ends of the jaw I are notched to receive the sides of the fixed jaw A, which sides serve as guides for it.

The part F of the screw rod has two longitudinal slots, *g g*, made in it at opposite sides to receive spurs, *h*, on the sleeve G, and at the inner end of each slot, *g*, there is a notch, *i*, to admit of the spurs *h* being fitted or turned therein, so as to keep the teeth *e* of the sleeve inward and free from the teeth *d* of the jaw I, when desired, as shown in Figure 2.

When the sleeve G is held in this position, the socket and screw may be turned, and in consequence of the latter working in the nut B, it will be seen that the jaw I may be moved towards and from the jaw A, the outer side *a** thereof, which is the jaw A proper.

When the jaw I is moved from the side *a** of A, the mop is inserted between *a** and I, and the sleeve G is then released by turning it so that the spurs *h* will be moved out from the notches *i* and in line with the slots *g*, when the spring H will throw the sleeve outward and cause its teeth to engage with those of the jaw I. With the sleeve G in this position, the screw C may be turned in the direction to force the jaw I towards the mop and

cause it to be firmly grasped and held between a^* and I, as the teeth of the sleeve will slip over those of jaw I; but the sleeve cannot turn in the opposite direction, and hence the casual receding of the jaw I from a^* is prevented, and consequently the accidental liberation of the mop.

In order to remove the mop from the head, the sleeve G is pressed inward, so that its spurs, *h*, will reach the inner ends of the slots *g*, and the sleeve then turned so that the spurs will catch into the notches *i*, when the jaw I may be moved inward from a^*, and the mop removed.

I claim as new, and desire to secure by letters patent—

The screw C, in connection with the nut B and sleeve G, the
162 latter being provided with ratchet teeth, *e*, and arranged on the part F of the screw rod with a spiral spring, H, the part F being provided with slots and notches to receive the spurs of the sleeve and connected with the jaw I, as shown, and the jaw provided with ratchet teeth, *b*, all arranged substantially as and for the purpose set forth.

NELSON HOMES.

Witnesses:
E. D. HOMES.
WILLIAM C. GRAHAM.

Ex'd: G. R.

163 DEF'TS' KARR EXHIBIT.—R. E. S., *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Corydon Karr, dated September 26th, 1865, No. 50137, for mop-head.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of August, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

L. S.] J. M. THATCHER,
Acting Commissioner.

164 No. 50137.

The United States of America to all to whom these letters patent shall come:

Whereas Corydon Karr, of Buffalo, New York, has alleged that he has invented a new and useful mop-head, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said invention and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said Corydon Karr,

his heirs, administrators or assigns, for the term of seventeen years from the twenty-sixth day of September, one thousand eight hundred and sixty-five, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention, a de-

(Here follows diagram marked page 165.)

166 scription whereof is given in the words of the said Corydon Karr in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-sixth day of September, in the year of our Lord one thousand eight hundred and sixty-five, and of the Independence of the United States of America the ninetieth.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[L. S.] T. C. THEAKER,
Commissioner of Patents.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Corydon Karr, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful improvement in mop-heads; and I do hereby declare that the following is a full and exact description thereof, reference being had to the
167 accompanying drawings making part of this specification, in which—

Fig. 1 is a side elevation of my invention, the wood portion of the handle being omitted from the drawing.

Fig. 2 is a plan view of the collar-nut B, to which the movable jaw E is affixed, shown separately.

Fig. 3 is a side elevation of the jam-nut C, by which the collar E is secured in position, shown detached.

Like letters indicate corresponding parts in all of the figures.

The nature of my invention consists in the employment of a threaded collar carrying the movable jaw of the mop-head and working on a screw-shank, A, which is pivoted to the other jaw, together with a jam-nut for holding the collar securely in any position required.

As represented in the drawings, A is a screw-shank, made hollow at its upper extremity to receive the ordinary wooden handle. Its opposite end is provided with a pivot, which passes through the stright jaw D and is headed or otherwise constructed so that the jaw may revolve freely without coming off. The other jaw E is rigidly connected with arms on the sides of the threaded collar B. By turning the shank A in the collar B,
168 or vice versa, the collar traverses the thread of the shank, and car-

ries the movable jaw E to or from the stationary one D, according to the direction in which the one is rotated.

Fitted, also, to the thread of the shank A is a jam-nut, C, provided with lugs or any other convenient means for turning with the hand. This nut is employed to hold the collar B firmly in the position required to damp the mop-cloth; and the operation is this: The cloth being inserted between the two jaws, the screw-shank A is turned by the handle (or the head turned while the handle remains stationary) until the cloth is pressed between the two as tightly as necessary, when the jam-nut C is turned so as to press hard against the collar. This fixes it immovably, as no amount of vibration or use will have the effect to loosen both screws, and by this means the mop-fastening is rendered entirely secure, and a great cause of trouble is obviated. The bearing surface of the jam-nut is preferably made somewhat conical, and a corresponding recess provided in the collar to receive it, to ensure a considerable degree of friction between the two. This same result may be accomplished by casting the two surfaces with corresponding annular grooves and rings, or by simply making the surfaces flat and broad. The advantage gained by this device is that the nut, working freely as it should upon the screw, will, in moving the collar back and forth to adjust it, when there is no resistance to the jaw, carry the jam-nut with it by the friction of their adjoining surfaces, the two then acting as a single nut, and prevent the necessity of turning the jam-nut separately. When the collar is screwed down firmly on the mop-cloth, however, the effect of setting the jam-nut hard against it imparts the greater friction to the thread, and thus holds the collar immovably in place.

In mop-heads as heretofore constructed, the damping of the cloth is effected by screwing a nut or collar down, the resistance of which comes against the shoulder, often formed on the wooden handle. The constant working of the mop tends to unloose the head from the handle, or to undamp the cloth; and in order to obtain a requisite shoulder for this mode of construction, the handle is so much weakened by being cut away that it is liable to break at this point.

The advantages of my improvement are that greater strength is obtained both in the head and handle of the mop; the damping of the mop-cloth is entirely reliable. The collar moves from the jam-nut in the act of spreading the jaws to change the cloth, thereby making it unnecessary to remove the jam-nut by hand, and the jaws may be opened or closed by turning either the handle or the head, so that unskillful persons cannot fail of working it successfully.

What I claim as my invention, and desire to secure by letters patent, is—

169 The combination and arrangement of the jam-nut C with the threaded collar B and screw-shank A, operating as and for the purposes set forth.

I also claim, in combination with the jam-nut C and collar B, the pivoting of the screw-shank A in the stationary jaw D, whereby the opening and closing of the jaws may be effected by turning either the head or handle of the mop, substantially as described.

I also claim, in combination with the threaded collar B and screw-shank A, forming the contiguous surfaces of the jam-nut C and collar B, conical

or of equivalent shape, substantially in the manner and for the purposes set forth.

CORYDON KARR.

Witnesses:
J. FRASER.
J. HYATT.
Ex'd: M. P. H.

170 DEF'TS' MASON & MESSINGER EXHIBIT.—R. E. S., *Ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted H. H. Mason and Joseph Messinger, dated May 14th, 1867, No. 64683, for "Imp'd Mop-head."

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of August, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.]

J. M. THACHER,
Acting Commissioner.

171 No. 64683.

The United States of America to all to whom these letters patent shall come:

Whereas H. H. Mason and Joseph Messinger, of Springfield, Vermont, have alleged that they have invented a new and useful improved mop-head, which they state has not been known or used before such invention; have made oath that they are citizens of the United States; that they do verily believe that they are the original and first inventors or discoverers of the said invention, and that the same hath not, to the best of their knowledge and belief, been previously known or used; have paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are therefore to grant, according to law, to the said Mason and Messinger, their heirs, administrators, or assigns, for the term of seventeen years from the fourteenth day of May, one thousand eight hundred and sixty-seven, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a
172 description whereof is given in the schedule hereunto annexed, and made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed. Given under my hand, at the city of Washington, this fourteenth day of May, in the year of our Lord one thousand eight hundred and sixty-seven, and of the Independence of the United States of America the ninety-first.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] T. C. THEAKER,
Commissioner of Patents.

173 UNITED STATES PATENT OFFICE.

H. H. Mason and Joseph Messinger, of Springfield, Vermont. Letters patent No. 64683, dated May 14, 1867. Improved mop-head.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that we, H. H. Mason and Joseph Messinger, of Springfield, in the county of Windsor and State of Vermont, have invented a new and improved mop-head, and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and improved mop-head of that class in which a screw and nut are employed for operating the movable jaw. The object of the invention is to obviate two difficulties, to wit: first, the slow movement of the movable jaw in securing the mop-cloth in the head and in detaching it therefrom; and, second, the liability of fracturing the nut in connecting the movable jaw thereto, contingencies attending the construction of the ordinary mop-heads of this class.

The accompanying drawing represents a side sectional view of our invention.

A is a portion of the handle of the mop-head, constructed of wood, and having a rotary tubular screw, B, fitted on its end, said screw B having thumb-pieces *a a*, attached for the convenience of turning it. This screw B is provided with two threads *b b'*, and in the screw a nut, C, is fitted,

(Here follows diagram marked page 174.)

175 which is provided at opposite points with lateral ears or projections *c c*. These ears or projections are drilled longitudinally and have internal screw-threads, in which the ends *d d* of the movable jaw D are screwed; the ears or projections having one a right and the other a left hand screw-thread, and the threads on the ends of the jaw D also having one a right and the other a left hand screw-thread, so that by the turning of the jaw D before it and the nut are adjusted to the handle, the ends of the jaw will be simultaneously screwed into the ears or projections. By this means the movable jaw may be connected to the nut C without any trouble or difficulty whatever. The usual way is to rivet the ends of the movable jaws in the ears or projections on the nut, and as the latter is of cast-iron it is frequently broken by the operation. The fixed jaw E is attached to the handle A just beyond the outer end of the screw B. Both the fixed and movable jaws are of ordinary construction, and therefore do not require a special description. By having the screw B provided with two threads *b b'* a quick movement of the jaw D is obtained.

Having thus described our invention, we claim as new, and desire to secure by letters patent—

The connecting of the movable jaw D to the nut C by means of the right and left screw-threads on the ends of the jaw D, fitting in right and left female or internal screw-threads in ears or projections *c c* on the nut C, substantially as shown and described.

The above specification of our invention signed by us this 24th day of December, 1866.

H. H. MASON.
JOSEPH MESSENGER.

Witnesses for H. H. Mason:
WM. F. MCNAMARA.
ALEX. F. ROBERTS.

Witnesses for Joseph Messenger:
WM. H. ALLBA.
JOHN B. O. COVINGTON.

176 DEF'TS' EXHIBIT CLARK & FERGUSON.—R. E. S., *ex'r.*

UNITED STATES PATENT OFFICE.

Charles B. Clark & E. L. Ferguson, of Buffalo, N. Y. Letters patent No. 82383, dated September 22, 1868.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that we, Charles B. Clark and E. L. Ferguson, of the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful improvements in mop-heads; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, in which—

Figure I is a partially sectional view of a mop-head provided with our improvements.

Figure II is a bottom plan of the collar and clamping-nut.

Figure III is a plan of one portion of the collar.

Figure IV is a side elevation of the clamping-nut detached.

Figure V is a sectional view of the screw-ferrule, showing the shank of the cross-head inserted in place in the handle.

Like letters of reference designate like parts in all the figures.

The invention relates to that class of mop-heads in which the mop-cloth is clamped by means of a nut, traversing a screw-shank and carrying with it a surrounding collar to the ears of which the ends of the rod or wire are attached.

The invention consists in forming the said collar in two portions, each provided with an oval opening to admit the insertion of the lower end of the nut, constructed with a projecting flange on two opposite sides, each of the said portions of the collar being provided with a ledge that will fit in the end of the elongated opening of the other, after they have been adjusted together on the nut, and prevents the latter being withdrawn.

In the drawings A represents the lower end of the wooden handle, on which is fitted ferrule B, provided with an external thread on which traverses the thumb-nut C.

D D are the two portions of the collar encircling the nut provided with ears *d d*, in which are riveted the ends of the binding rod or wire E, which also serve to fasten the parts D D together.

F is the cross-head against which the binder E presses in clamping the mop-cloth. This cross-head is formed with a shank, *f*, which fits in V-shaped opening in the end of ferrule B as it is driven into the ends of the handle A, when it acts as a wedge to secure the three parts together, as is clearly represented in Figs. I and V.

(Here follows diagram marked page 177.)

178 The nut C is cast with a flange, *c*, at the upper edge, and flanges *c' c'* at the lower edge, as shown most clearly in Figs. II and IV, which serve to retain the collar D in place, when the parts thereof are adjusted on the nut, as will presently be explained.

The portions D D, of the collar are to be formed in a similar manner, so, when riveted together by the ends of the binders, as before described, they will form a single collar. The openings *h h* in them are elongated, to admit the passage of the flanges *c' c'* in adjusting the parts on the nut.

From the contiguous sides of the portions D D, at opposite ends of the opening *h*, extend flanges or ledges *i*, of the form of the elongated end of the opening, and of a thickness equal to the said elongation, or the eccentricity of the opening, so that as the second or lower half of the collar is adjusted on the nut each of these ledges will fit in the end of the opening of the other, and around the nut, so as to form a circular opening, and prevent the withdrawal of the nut by the flange *c'* stopping against the end of the ledges *i*, as shown in Fig. I, when the nut is turned, so as

179 to occupy any other relative position the sides of the openings in the collar will act as a stop for the flange *c'*, as represented in Fig. II.

The contiguous surface of the parts D D of the collar may be cast with a dent and indent, *m n*, which, engaging each other, perfectly insures the retaining of the parts in their proper relative position when brought together.

The clamping and releasing of the mop-cloth are effected in the usual manner by turning the nut C, by means of its thumb-pieces, which causes the collar to advance and recede with it, and the binder to approach and recede from the cross-head, between which the cloth is clamped.

What we claim as our invention, and desire to secure by letters patent, is—

The nut C, provided with flanges *c c'*, or equivalent, in combination with the collar portions D D, formed with elongated openings *h*, and ledges *i*, substantially in the manner and for the purpose set forth.

C. B. CLARK.
E. L. FERGUSON.

Witnesses:
W. J. CHAMBERLAIN.
VICTOR H. BECKER.

180 DEF'TS' EXHIBIT TAYLOR.—R. E. S., *ex'r.*

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissue letters patent granted Luke Taylor, dated October 19th, 1869, No. 3682, for imp'd mop-head.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of August, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety ninth.

[L. S.]

J. M. THACHER,
Acting Commissioner.

181 No. 3682, reissue.

The United States of America to all to whom these letters patent shall come:

Whereas Luke Taylor, of Springfield, Vermont, has alleged that he has invented a new and useful improved mop-head (for which letters patent were issued to him, dated Feb'y 15, 1859, the same surrendered and new letters issued to him, dated November 10, 1868, which second letters were surrendered and new letters issued to him dated November 24, 1868, which last letters having been surrendered by him, the same have been cancelled and new letters ordered to issue to him on an amended specification), and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said invention, and that the same hath not to his knowledge and belief been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

(Here follows diagram marked page 182.)

These are therefore to grant to the said Luke Taylor, his executors, administrators or assigns, for the term of fourteen years from the fif-
183 teenth day of February, one thousand eight hundred and fifty-nine, the full and exclusive right and liberty of making, using, and vending to others to be used the said invention, a description whereof is given in the annexed schedule, and made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed. Given under my hand, at the city of Washington, this nineteenth day of October, in the year of our Lord one thousand eight hundred and sixty-nine, and of the Independence of the United States of America the ninety-fourth.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.]

SAM'L S. FISHER,
Commissioner of Patents.

184 UNITED STATES PATENT OFFICE.

Luke Taylor, of Springfield, Vermont. Letters patent No. 22990, dated Feb'y 15, 1859. Reissue No. 3192, dated November 10, 1868. Reissue No. 3215, dated November 24, 1868. Reissue No. 3682, dated October 19th, 1869. Improved mop-head.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Luke Taylor, of Springfield, in the county of Windsor and State of Vermont, have invented a new and improved mop-head; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an external view of my invention.

Figure 2 is a longitudinal section of the same, taken in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the handle of the mop-head, said handle being constructed of a tough, elastic wood, and B represents the stationary jaw of the head, which is of T-form, one portion, *a*, being a socket, which is fitted on the end of the handle A, and secured permanently thereto by means of rivets *a'*, one or more.

On the handle A, below the socket *a*, and between said socket and a shoulder, *a+*, on the handle, a collar, C, of cast-iron, is placed, and allowed to turn freely, the lower end of said collar having projections *b* attached, for the purpose of allowing said collar to be readily turned by the hand or thumb and fingers.

On this collar there is cast a screw-thread, *c*, on which a nut, D, works.

The nut D is provided with projecting ears *c' c'*, at opposite sides of it, and to these ears *c' c'* the ends of a jaw, E, are attached.

The jaw E is formed of a curved wrought-iron rod, so bent that a portion, *d*, of it will be parallel with the portion *e* of the stationary jaw B, and the remaining portions *f f* so bent that they will pass around the ends of the stationary jaw B, fitting in recesses therein, and serving as guides, and their lower parts curved so as to be attached to the projecting ears *c' c'* of the nut D, as shown clearly in Fig. 1.

The stationary jaw B may be of cast-iron, malleable, if desired, and the collar C, with its screw *c*, may be of the same material.

From the above description it will be seen that by simply turning the collar C the jaw E will be moved in and out from the
185 stationary jaw B, and the cloth or mop firmly secured in the head or between the two jaws, and also readily released or detached therefrom when necessary.

I am aware that the nut operating the movable jaws or binders of mop-heads have been manipulated by means of a nut, with ears or projections placed between the movable jaws or binders and the cross-head.

I am also aware that mop-heads have been made with an external screw-thread, of wrought-iron or wood, cut on the handle or shaft and working into a wrought-iron nut or internal screw cut into the cross-head or yoke of a movable jaw; but the wooden screw, by reason of its swelling and binding when wet, and the wrought-iron screw rusting and binding, and the fineness or closeness of the screw-threads, made the process of tightening and loosening the mop a slow process, and rendering the mop-head, thus constructed, inoperative and of little value. These, therefore, I do not claim broadly, or in themselves considered; but what I do claim as new, and desire to secure by letters patent, is—

1. In a mop-head in which the cross-head or stationary jaw is attached permanently and immovably to the handle, operating the movable jaw or binder by means of a tubular screw or socket fitted on the handle, and having its screw-thread on its exterior, in combination with a nut encompassing the screw, and connected with the movable jaw, so as to operate substantially as shown and described.

2. In a mop-head, in which the movable jaw or binder is operated through the medium of a screw-nut or collar, by means of thumb-ears attached to or formed with the said screw-nut or collar, placing the said ears outside the yoke or bow of the movable jaw or binder aforesaid, as herein described, for the purpose set forth.

LUKE TAYLOR.

Witnessess:
S. J. YOUNG.
JAMES DAVIS.

186 DEF'TS' EXHIBITS CLARK PATENTS.—R. E. S., *ex'r.*

128711.

UNITED STATES PATENT OFFICE.

Charles B. Clark, of Buffalo, New York. Improvement in mop-heads. Specification forming part of letters patent No. 128711, dated July 9, 1872.

Specification.

To all whom it may concern:

Be it known that I, Charles B. Clark, of the city of Buffalo, in the county of Erie and State of New York, have invented an improvement in mop-heads, of which the following is a description:

It is the object of my invention to so construct a mop-head that the wire which forms the movable jaw is secured to the cast-iron collar by the same rivets which serve to unite the parts of the collar and form a facile and reliable connection, and to enable the shank of the solid head to be cast with less expense in molding than when made, as ordinarily done, with a screw-thread; and it consists in connecting the ends of the wire movable jaw by bending them laterally and receiving the bent portion in a socket surrounding the rivet, which secures the two parts of the collar together, and in such a manner that the rivet and the walls of the socket prevent the wire from being moved in or out; in providing the collar with a central

annular groove, in combination with the double spurs on the nut, for insuring a secure and equal connection; and in providing the shank of the fixed head with a double series of teeth upon its sides, which engage with an inclined feather of the nut, said teeth enabling the shank to be molded more easily and perfectly from the parting of the sand in the mold being on the plane portion of the cylinder.

Figure 1 is a general plan view of my improved mop-head of reduced size. Fig. 2 shows the movable jaws D, collar, and nut, the two latter being in section on the plane of the wire frame. Fig. 3 is a plan of the interior of one-half of the collar, showing the bent ends of the wire frame D. Fig. 4 is an end view of the nut G. Fig. 5 is an end view of the hollow shank of the fixed jaw. Fig. 6 is a side view of the same, the jaw being shown in section.

The fixed jaw A and shank B (which may be cast together or separately, as preferred) are attached to the handle C of the mop. The movable jaw D is a wire frame of the usual shape, and is carried by the traversing-collar E, which surrounds the shank B. This collar is formed in two

(Here follows diagram marked page 187.)

188 longitudinal halves, with arms *e e* at opposite sides for riveting and connecting with the jaw D, the ends of which are laid in coincident grooves in the faces, which are in line with the rivet-holes. These holes are surrounded in each half by an annular recess, *f f*, Fig. 3, and the ends of the wire are bent so as to pass the rivets *e* and lie in these recesses, where they are firmly held when the collar is riveted, the rivet preventing their being forced in and the recess preventing their being withdrawn. One part of the collar is cast with annular grooves *a b* on the face of its aperture, and the hollow nut G provided with spurs, which engage in these grooves, the one, *d*, fitting the groove *a*, and the other, *i*, arranged on the opposite side of the nut, and in a position to enter the central annular groove *b*. These allow the nut to turn freely and have an equal bearing on both sides, which insures a steady movement of the jaw and uniform pressure on the cloth when clamped between the jaws. An outside flange, *g*, gives increased strength and conceals the joint between the nut and collar. From the collar being divided flatwise the grooves *a b* may be molded in one part easily and without coring, and the rivet-holes also cast, whereby all drilling is obviated. The nut is provided with an inclined feather, *h*, and the shank B has on it' opposite sides, by preference, two series of teeth *k k*, with which said feather engages, and, owing to its inclination, causes the nut, when rotated by the thumb-pieces *j j* to traverse the shank endwise, carrying with the collar E and movable jaw. By turning the nut in one direction the cloth is clamped between the jaws A and D, and released by turning in the opposite direction. The teeth *k* of the shank B are broadest at their base, and rounded or pointed at their extremities, being of a form easily molded and cast, and their arrangement in a series on opposite sides of the shank enables them to be molded from a solid pattern, which, having a plain cylindrical surface between the teeth, is easily withdrawn without breaking the sand, materially reducing the cost of manufacture over those shanks which are cast with a screw-thread upon them, and, owing to this facility of molding, a more perfect casting can be produced.

the English letters patent granted Chas. Wm. Rowley Rickards, dated October 1st, 1852, No. 45, for imp'ts in tongs for screwing pipes and screws.

In testimony whereof, I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this fourth day of September, in the year of our Lord one thousand eight hundred and seventy-four, and of the Independence of the United States the ninety-ninth.

[L. S.]

J. M. THACHER,
Acting Commissioner.

(Here follows diagram marked page 193.)

194 Specification in pursuance of the conditions of the letters patent, filed by the said Charles William Rowley Rickards, in the Great Seal Patent Office, on the 30th March, 1853.

To all to whom these presents shall come, I, Charles William Rowley Rickards, of 28 New Cut, Blackfriars Road, in the County of Surrey, send greeting:

Whereas Her Most Excellent Majesty Queen Victoria, by her letters patent, bearing date the first day of October, in the year of our Lord one thousand eight hundred and fifty-two, in the sixteenth year of her reign, did for herself, her heirs, and successors, give and grant unto me, the said Charles William Rowley Rickards, her special license, that I, the said Charles William Rowley Rickards, my executors, administrators, and assigns, or such others as I, the said Charles William Rowley Rickards, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter, during the
195 term therein expressed, should and lawfully might make, use, exercise, and vend within the United Kingdom of Great Britain and Ireland, the Channel Islands and Isle of Man, an invention for improvements in tongs for screwing pipes and tubes, upon the condition (amongst others) that I, the said Charles William Rowley Rickards, by an instrument in writing, under my hand and seal, should particularly describe and ascertain the nature of the said invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office, within six calendar months next and immediately after the date of the said letters patent:

Now know ye, that I, the said Charles William Rowley Rickards, do hereby declare the nature of the said invention, and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement thereof, that is to say:

My invention consists of constructing tongs for screwing gas
196 and other pipes or tubes, the same pair of tongs being capable of screwing different sizes of tubes or pipes, by reason of the length of one of the limbs being made adjustable, and caused to work through a slot in the other limb. The adjusting limb is provided with a spring jaw, which gives way in the return movement, and holds the pipe or tube fast in the other jaw in the forward movement. And, in order that my invention may be most fully understood and readily carried into effect I will proceed to describe the means pursued by me:

DESCRIPTION OF THE DRAWING.

Figure 1 shows a side view of a pair of tongs constructed according to my invention. Figure 2 shows the moveable and adjustable limb of the tongs separately. a is the moveable limb; b is the limb through which the moveable limb works, there being a slot through the moveable limb for that purpose. The moveable limb a is composed of two parts, a, a^1, the part a being the handle, the part a^1 being the jaw, which is af-
187 fixed to but moves on an axis at the end of the part a by reason of a pin joint, a^2, and the part a^1 is kept in position by the spring a^3. The instrument shown is suitable for tubes or pipes of the respective sizes of one inch, three-eighths of an inch, and half an inch; and the mark on the limb b indicates the point to which the moveable limb is to be set by the screw-nut when the tongs are to be used for those sizes respectively. At the end of the limb b is formed a fork, b^1, into which the stem of the adjusting screw-nut enters as is shown; and the adjustment of the moveable limb a for a particular size of pipe or tube is obtained by turning the nut a^4 in one or other direction; and in taking hold of a pipe or tube by these tongs the moveable limb a is moved out of the fork b^1, and the hooked end of the limb b is placed on the pipe or tube, and the nut on the limb a is placed in the fork b^1, and the holding of the pipe
198 in one direction will be sufficient; and on the return movement the moveable jaw will give way.

Having thus described the nature of my invention and the manner of performing the same, I would have it understood that I do not confine myself to the precise details shown and described so long as the peculiar character of the invention, as herein explained, be retained; but what I claim is the mode herein described of combining the parts of tongs for screwing pipes and tubes.

In witness whereof I, the said Charles William Rowley Rickards, have hereunto set my hand and seal this twenty-eighth day of March, in the year of our Lord one thousand eight hundred and fifty-three.

CHARLES WILLIAM ROWLEY RICKARD. [L. S.]

Witness—

S. CARPMAEL.

(Endorsed:) Filed Jan'y 21, 1875.

(Here follows diagram marked page 199.)

200 United States circuit court, northern district of New York. In equity.

OLIVER S. GARRETSON, complainant,
against
CHAS. B. CLARK, JOHN K. CLARK, EDWARD L. FERGUSON, and HENRY R. CLARK, defendants.

Minutes of testimony before Geo. J. Sicard, master, &c.

December 1, summons issued.

December 11, 1875. Parties appear by consent. Mr. Allen for the complainant; Mr. F. A. Macomber for defendants.

After hearing Mr. Allen and Mr. Macomber, by consent of the counsel, the master directs that the defendants file with the master, on or before the 21st day of December, 1875, an itemized verified statement of the amount of the sales of the said defendants of the mop-heads referred to in the decree for the period embraced in the complaint, and extending down to the time of the service of the injunction, to wit, May 14th, 1875, reciting therein date of the shipment of goods sold, the name and place of business of the party to whom sold, the place where goods were delivered,
201 the number of dozen sold, the price and terms of sale, the amount of invoice, the amount of freight on such goods, the net amount received by them on such sales; and that the books of the defendants having reference to such sales be at the same time produced before the master.

It is agreed that the printed records in the case be considered as before the master, with liberty to either party to refer to and use them, together with the exhibits used on the trial.

Adjourned by consent to December 21st, at 10½ a. m.

DECEMBER 21ST, 1875.

John K. Clark, one of the defendants, appeared and filed statement under the foregoing order, verified before me; subsequently produced and and filed a book of accounts.

DECEMBER 28, 1875.

Parties appeared; also Mr. Allen for the complainant, and Mr. Macomber for defendants.

JOHN K. CLARK sworn for complainant.

I am one of the defendants herein. The book I have produced before the master is our sales-book containing the items of sales, from month to month. The entries in the book are made subsequent to the date of sale, from the day-book; they are made sometimes a day or two or three days after date of sale. It might be a week intervening. The book in which the original entries are made is the day-book. We have kept an invoice-book. It contains a copy of all invoices. We have a ledger for posting the accounts. The invoice is copied in the invoice-book by letter press. Before that is done the invoice is entered in the day-book; I mean that charges are made therein. We afterwards post from the day-book to the ledger.

202 This sales-book is a book drawn off or taken from the day-book of all sales as there appearing.

(Witness' attention called to page 111, May 7, 1875—To McNeal and Higgins, $59.40.)

That item is omitted from our account filed with the master.

(Witness' attention called to item on page 120 of book, date March 26, sale to Cheney & Langmaid, amount of $2.)

That item is omitted. It was an oversight in copying. That is the only way I can explain it. The entries in pencil in second column of the account in book produced were made from month to month, as we rendered our monthly account of sales. I would not swear positively that March 13, 1874, was the first date of sale of mop-heads by our firm or any

of its members, but I believe it to be. I would not swear positively that there were no such sales subsequent to May 7, 1875, but I firmly believe there were none sold after that date.

Ques. On May 7, 1875, were there not mop-heads on hand like those you had been selling, and which have been in some manner since disposed of?

Ans. There were not any completed mop-heads at that time on hand that have since been disposed of.

Ques. Subsequent to that date have there not been mops or mop-heads, similar to those previously sold by your firm, returned to you from customers, which have since been disposed of by your firm in some manner?

Ans. Not any that I know of.

Ques. If such had been the case would it have been more likely to come to the knowledge of some other member of the firm than yourself, or would you have been as likely to have known of it as either of the other members?

203 Ans. I think my attention would have been called to it. I think I would have been as likely as any one to have known of it.

Ques. Under the charge of which member of your firm, if either, was the department of sales of mop-heads?

Ans. I don't know as any one was designated in particular to look after that; we all had knowledge of it.

Ques. Did one take charge of that more than another?

Ans. The sale embraces the receiving of the order, the accepting of it, the boxing and shipping, and the invoice.

Ques. Who had main charge of the shipping?

Ans. H. R. Clark, my brother.

Ques. Who of the invoicing?

Ans. E. L. Ferguson, a member of the firm.

Ques. Who of the receiving and accepting the orders?

Ans. The members of the firm when they were present, including all.

Ques. You have brought no book here but this sales-book?

Ans. I have not.

Ques. Whose writing is this book made out in?

Ans. Our clerk, W. W. Clark; that is, the most of it; there is another hand, that is my handwriting from page 117 to 123; also including pages 110 and 111 is in my handwriting. From page 32 to 49, and 112 to 117, is in the handwriting of W. W. Clark, clerk or assistant book-keeper. On page 117 there is writing by H. R. Clark, a member of the firm.

On being examined by Mr. MACOMBER, he said:

This, the book, is one of our original books so far as concerns the
204 sales of 1874; the account therein of sales of 1875 is transcribed from the sales-book of 1875, which is now in use at our office.

JOHN K. CLARK.

Examination taken, reduced to writing, read over to the witness, and by him subscribed before me this twenty-eighth day of December, A. D. 1875.

GEO. J. SICARD, *Master, etc.*

The account filed December 21, 1875, before me is marked "A."
The sales-book produced is marked "B."

Adjourned to January 7, 1876, at 2 p. m.

JANUARY 7, 1876—2 p. m.

Mr. Allen appears for complainant; Mr. John K. Clark, one of the defendants, appears. A supplemental page to the account A is filed, and by consent is annexed by me to the original account, it being agreed that it shall stand instead of surcharges to be made to the account by the defendant.

GEO. J. SICARD, *Master, etc.*

Adjourned by consent to January 27, 1876, at 10½ a. m.

JANUARY 27, 1876.

Mr. Allen appears for complainant, and Mr. John K. Clark, one of the defendants, also appears.

By consent of parties this hearing is adjourned to January 28, 1876, at 11 o'clock a. m.

205 JANUARY 28, 1876, at 11 a. m.

Parties appeared; also Mr. Allen, of counsel for the complainant, and Mr. Macomber, of counsel for defendants.

OLIVER S. GARRETSON, sworn for the complainant, testified:

I am the complainant in this cause.

Ques. Where do you reside?

Ans. Buffalo, New York.

Ques. How long have you been a resident of Buffalo?

Ans. About ten years, except a short period of about two years, when I was away.

Ques. State what those two years of your absence were.

Ans. They were in 1867 and 1868.

Ques. What has been your occupation in this city since your return in 1868?

Ans. I have been a manufacturer of mop-heads and articles of hardware, &c.

Ques. State whether you have had a manufactory established in Buffalo.

Ans. I have had a manufactory in Buffalo since the spring of 1869, for the manufacture of mop-heads and other articles.

Ques. State whether you have had it down to the present time, and now have and carry on one.

Ans. I have had it and now have it, and carry on the manufacture of mop-sticks and other articles. By mop-sticks I mean the article complete, ready for sale.

Ques. Have you *kept* a record of your sales of mops since you have been engaged as a manufacturer of them?

Ans. I have.

Ques. State, if you please, what your annual sales have been of the article patented, and which is the subject of this suit.

206 (Defendants' counsel objects to the question because it assumes that all the mop-heads made by him were made under the patents in controversy, and embody their improvements. Further, that the record itself should be produced.)

It was here agreed that all the testimony offered should be taken subject to objection, and the master should note his decision on the margin before making his report.

Taken subject to objection.

(On the margin:) Objection overruled and evidence admitted. Exceptions for def'ts.—GEO. J. SICARD.

Ans. I have made a statement. From April 23, 1869, and during the balance of the year, I sold five thousand and eight hundred and ninety-five dozens of mop-heads embraced in the question; in 1870, nine thousand five hundred and twenty-nine dozens; in 1871, twelve thousand eight hundred and fifty-one dozens; in 1872, seven thousand eight hundred and fifty-five and one-half dozens; in 1873, nine thousand one hundred and forty-four dozen; in 1874, three thousand seven hundred and thirty-one dozens; in 1875, two thousand seven hundred and sixty-five dozens.

Ques. Can you make also a statement of the number of mops sold by you during the period embraced by the defendants' account on this accounting from March 13, 1874, to May 7, 1875?

(Same objection as above noted.)

(On the margin:) Objection overruled and evidence admitted. Exception for def'ts.—GEO. J. SICARD, *Master, etc.*

Ans. I can; it was three thousand eight hundred and forty-two dozens in all.

Ques. State the aggregate amount sold by you during the same period of the year preceding.

(Objected to on the same ground and as incompetent and immaterial.)

(On the margin:) Same ruling as above.—GEO. J. SICARD, *Master, etc.*

207 Ans. During the same relative periods of the years 1873 and 1874 I sold ten thousand two hundred and sixteen dozen.

Ques. Please make a comparative statement, month by month, of the amount of your sales during these two respective periods.

(Objected to on same grounds as last.)

(On the margin:) Same ruling. Exception for def'ts.—GEO. J. S.

Ans. From March 13 to March 31, inclusive, in 1873, I sold five hundred and twenty-seven dozens. For the same period in 1874 I sold three hundred and seventy-two dozens; in April, 1873, eleven hundred and fifty-six dozens; in April, 1874, eight hundred and sixty-eight dozens; in May, 1873, thirteen hundred and twenty dozens; in May, 1874, three hundred and sixty dozen; in June, 1873, twelve hundred and twenty-two dozens; in June, 1874, one hundred and fifty-four dozens; in July, 1873, six hundred and twelve dozens; in July, 1874, one hundred and eighty-six dozens; in August, 1873, eight hundred and eighty-two dozens; in August, 1874, ninety-one dozens; in September, 1873, six hundred and fifty-two dozens; in September, 1874, two hundred and twenty-five dozens;

in October, 1873, five hundred and sixty-one dozens; in October, 1874, one hundred and sixty-six dozen; in November, 1873, four hundred and eighteen dozens; in November, 1874, one hundred and twenty dozens; in December, 1873, four hundred and sixty-eight dozens; in December, 1874, one hundred and fifty-one dozens; in January, 1874, four hundred and fifty dozens; in January, 1875, sixty-six (66) dozens; in February, 1874, three hundred and seventy-eight dozens; in February, 1875, one hundred and twenty-two dozens; in March, 1874, five hundred and eighty-two dozen; in March, 1875, three hundred and ninety dozens; in April, 1874, eight hundred and sixty-eight dozens; in April, 1875, four hundred and
208 seventy-five dozens; from May 1st to May 7th, inclusive, 1874, one hundred and twenty dozens; from May 1st to May 7th, inclusive, in 1875, ninety-six dozens.

Ques. State now the aggregates for the whole of each of the respective periods covered by your previous answer.

(Same objection as before.)

(On the margin:) Same ruling. Exception for def't.—GEO. J. S.

Ans. The total number of dozens for the first period, from March 13, 1873, to and including May 7, 1874, was ten thousand two hundred and sixteen dozens. The totals of the second period, from March 13, 1874, to May 7th, 1875, was three thousand eight hundred and forty-two dozens.

Ques. Showing a falling off of how many dozens?

(Same objection as before.)

(On the margin:) Same ruling. Exception for def't.—GEO. J. S.

Ans. Showing a falling of six thousand three hundred and seventy-four dozens.

Ques. Can you state the aggregate amount of your sales in the year 1875 from May 7, 1875, to the end of the year?

(Same objection as before.)

(On the margin:) Same ruling. Exception for def'ts.

Ans. I cannot without reference to my books or papers; I find upon reference to my papers that it was one thousand six hundred and twelve dozens.

Ques. Have you examined the account which has been made and filed by the defendants in this accounting and marked "A"?

Ans. I have.

Ques. Have you made a computation from what is shewn in the items of the account of the aggregate number of dozens of mops included in this account marked "A" which were sold to the purchasers who had previously been customers of yours for mops?

209 Ans. I have.

Ques. State the number of dozens so found.

(Objected to by defendants' counsel as incompetant and immaterial.)

(On the margin:) Objection overruled and evidence admitted. Exception for def'ts.—GEO. J. S.

Ans. I find the number to be nine thousand three hundred and thirty-eight dozens.

Ques. Have you prepared a list of the names of the persons or firms so

found to have been previous customers of yours, and of the number of dozens, respectively, which the defendants' account shows purchased by each?

Ans. I have; this is the list.

(Said list is offered in evidence by the complainant's counsel.

Objected to by the defendants' counsel as incompetent and immaterial.

List received and marked "Complainant's Exhibit No. 1.")

(On the margin:) Objection overruled and evidence admitted. Exception for defendants.—GEO. J. S.

Ques. Have you examined the defendants' account marked "A" with reference to ascertaining whether the sales shown by the account have been made exclusively to wholesale dealers?

Ans. I have.

Ques. State what the account shows in that respect.

(Objected to by defendants' counsel on the ground that the account speaks for itself.)

(On the margin:) Objection overruled and evidence admitted. Exception for def'ts.—GEO. J. S.

Ans. I find that two thousand four hundred and fifty-seven and one-half dozen were sold to small dealers, or dealers I would not class as wholesale dealers in mops.

Ques. State what the course of your trade had been with reference to the class of persons to whom sales were made.

210 Ans. My custom in selling mops has been to sell to the wholesale trade, and not to sell in small lots to small dealers.

Ques. State what the effect upon the trade is when sales are made by the manufacturer to both the wholesale and retail dealers in the trade.

(Objected to by the defendants' coun' as immaterial.)

(On the margin:) Objections overruled and evidence admitted. Exception for def'ts.—GEO. J. S.

Ans. Adopting that course would enable me for a time to sell a greater number of mops than I could sell in the ordinary course of trade; and it would have the effect of overstocking the market.

Ques. With what effect upon the future demand?

(Same objection.)

(On the margin:) Same ruling. Exceptions for def'ts.

Ans. Overstocking the market would have the effect of cutting off the future demand or anticipating the trade for a time not yet reached.

Ques. Have you examined this account marked "A" with reference to the localities of the persons to whom the small sales were made, and to whether they were located at places or vicinities usually supplied by you through wholesale houses?

Ans. I have.

Ques. What do you find?

Ans. I find that they were almost all, if not all, within the territory supplied by wholesale customers of mine.

Ques. Where was the location of the defendants' manufactory while they were manufacturing and selling the mops specified in the account marked "A"?

Ans. It was on Niagara street in Buffalo, New York.

Ques. Where was your manufactory during the same period?

211 Ans. It was on Henry street in Buffalo New York.

Ques. State what your facilities were, during the period covered by this account, for manufacturing and selling mops.

Ans. I had a foundry and machine shop, supplied with tools and materials, and was in condition to fill all ordinary orders for mops, even far more than I ever had had or could reasonably expect. My facilities for selling were good.

Ques. State what the condition of your trade on the 13th day of March, 1874, was, with reference to being established, and with reference to the need of efforts on your part for working up a trade in mops.

Ans. My trade at that time was established, and did not require any special effort on my part to take orders, as I was well known as a manufacturer of mop-heads. My mop being known throughout the country, the price being established, the dealers in mop-heads usually sent their orders direct to me without solicitation.

Ques. At that time what was the established price of your mops?

Ans. The general price was two dollars per dozen. In some instances and at some places I sold at higher prices.

Ques. For how long a period had that price been established?

Ans. The price had been about the same since the latter part of the year 1871. I had made some slight changes in some parts of the country, and to some dealers—some slight changes.

Ques. At what rates were your sales of mops made during the period of time covered by the account marked "A"?

Ans. My prices during that time were slightly lowered from what they had previously been, and was at the average rate of one dollar and ninety-six cents and a fraction of $\frac{166}{1000}$ per dozen.

212 Ques. State in what manner you arrive at this average price.

Ans. I arrive at that price by taking the total amount of invoices of mops sold at that period and dividing by the number of dozens sold, giving the average of $\$1.96\frac{166}{1000}$.

Ques. Have you estimated in like manner your average freight for the same period per dozen?

Ans. I have averaged the freight per gross—twelve dozen—and find it to be sixty-seven cents per gross.

Ques. Making your net receipts per gross and per dozen during that period what?

Ans. One dollar and ninety cents, and a fraction of 5827 ten thousandths per dozen, and twenty-two dollars and eighty-six cents and a fraction of 9924 ten thousandths per gross.

Ques. During the period embraced by the account A what was the aggregate amount of your sales of mops?

Ans. The net amount received was seven thousand three hundred and twenty-two dollars and nineteen cents, exclusive of freight.

Ques. Freight included, what is the total?

Ans. Seven thousand five hundred and thirty-six dollars and seventy cents.

Ques. From the close of the year 1871 to the 13th of March, 1874, in your business as a manufacturer of your patented mops, what other mops

entered into competition with you, if any, in the general trade of the country?

Ans. There was no other mop in the market that had any considerable sale that I had to compete with. There were a few made here and there, but not to any considerable extent.

Ques. During the period named what mops furnished the substantial supply of the country at large?

213 Ans. There were two mops; my mop, known as the Garretson mop, and another mop known as the Taylor mop.

Ques. During the period named was the Taylor mop in competition with yours?

(Objected to by defendants' counsel as calling for a conclusion.)

(On the margin:) Objections overruled. Evidence admitted. Def'ts except.—GEO. J. S.

Ans. It was not.

Ques. For what reason was it not?

Ans. I had an arrangement with the owners and manufacturers of the Taylor mop by which I could control the price of the Taylor mop.

Ques. State whether or not by arrangement between you and the owners of the Taylor mop a uniform price was fixed between you.

Ans. By that arrangement a uniform price was fixed between us, and could not be varied without the consent of both parties.

Ques. Was that arrangement subsisting between you and the owners of the Taylor mop at the time the defendant in this case began to manufacture and sell the mops mentioned in the accounts marked "A"?

Ans. It was.

Ques. During that period who were the proprietors of the Taylor mop?

Ans. Smith, Mason & Co. were the proprietors and manufacturers of the Taylor mop, and were the parties with whom I had that arrangement.

Ques. Is one of the members of that firm present?

Ans. H. H. Mason, one of the members of the firm, is present.

Ques. Previous to the arrangement to which you have referred for fixing the prices of the Taylor and Garretson mops, had the Taylor and Garretson mop been in competition with each other in the market?

214 Ans. They had been in competition, and were in competition up to the time of making that arrangement.

Ques. What is the character of the mop trade in the United States, with respect to its being regular or irregular as to the demand?

(Objected to by defendants' counsel as incompetent.)

(On the margin:) Objection overruled. Exception for def'ts.—GEO. J. S.

Ans. From my experience as a manufacturer and dealer in mops since the year 1869 I should say that the trade was somewhat regular, slightly increasing year by year.

Ques. What advantage to the user did your patented mop, as made and sold by you, possess over the unpatented article?

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.—GEO. J. S.

Ans. My improvement enabled me to make a mop that was light, compact, and easily adjusted to hold the mop-cloth, and not liable to release it in use.

Ques. During this period were these qualities substantially possessed by any other mop than yours and the Taylor mop?

(Same objection.)

(On the margin:) Same ruling. Exception for def'ts.—G. J. S.

Ans. They were not by any mop of which I have knowledge.

Ques. State fully what knowledge you have during the period named of other articles of mops being in the market than yours and the Taylor mops, and the character of the sales, if any, of the mops.

Ans. I have knowledge of most all the mops that were made and sold in the market during that period, as I visited the principal cities where mops were sold and saw the kinds of mops that were on sale. There were a few wooden mops sold, and but few, as far as my observa-
215 tion went, and they were sold at very low prices. I think about fifty or sixty cents a dozen. There was another mop made—an iron mop, called the Manchester mop—which was sold to a limited extent and at low prices, about $1.50 per dozen or less. There were also a few made in Buffalo also at that time, or shortly before that time, that were not sold to any considerable extent. This, I believe, is all that I now think of, without it was some that was made in New England that I scarce ever found in the market. I don't know the name of it.

Ques. State whether any of these mops you have named in your last answer had a general sale throughout the country to the trade at large.

Ans. None of them had what I consider a general sale, or even any considerable sale.

Ques. What were the defects of the wooden mops in use?

Ans. They were defective in the working parts being made of wood, and consequently being large and cumbersome and liable soon to rot and become useless; and, further, the head revolving on the handle was liable in use to allow the mop-cloth to be released from the grasp of the mop-head.

Ques. Could any appreciable amount of profit have been realized from the manufacture and sale of the wooden mops?

(Objected to as immaterial, and that the witness does not show himself capable of speaking on that question.

(On the margin:) Objection overruled. Exception for def'ts.—G. J. S.

Ans. I think there could not have been, as the sale was very limited and the prices at which they were sold were very low.

Ques. State what were the defects in use of the Manchester mops to which you have referred.

Ans. In the Manchester mop the head was pivoted to the han-
216 dle in such a manner that in using the mop the cloth was constantly working loose, and the head, being separate from the handle, was liable to come off and become lost.

Ques. State the relative cost, if you know, of the manufacture of the Manchester mop as compared with that of your own mop—whether more or less.

Ans. The Manchester mop was heavier than my mop and required more cast-iron and wire to make it, and cost more than my mop to manufacture.

Ques. State what you know in reference to the cost and sale price of the New England mop to which you have referred.

Ans. I know but little about that mop. I do not now recollect as to what kind of a mop it was. I think I heard it was sold at one dollar sixty-five to one dollar seventy-five per dozen.

Ques. So far as it was sold, to what locality did it seem to be confined?

Ans. I think it was principally sold by peddlers in the New England States, not going into the general market at all.

Ques. During the period covered by this account marked "A" what mops entered into the general trade other than yours and the Tayler mop?

Ans. The Clark mop went into the general trade during that period.

Ques. Were there any others?

Ans. Not to any considerable extent.

Ques. Have you estimated the cost of the labor and materials in your patented mop during the period from March 13, 1874, to May 7, 1875, per dozen or per gross?

Ans. I have.

Ques. Have you made such estimate in writing?

Ans. I have.

Ques. Will you produce it?

217 (Witness produces paper marked "Complainant's Exhibit No. 2." Offered in evidence and received.)

Ques. Does this paper marked "Complainant's Exhibit No. 2" contain a just and true estimate of the actual cost of materials and labor in the manufacture of your patented mop at your manufactory in Buffalo during the period covered by the account marked "A"?

Ans. It does.

Ques. Does it also contain a correct statement of your average freight, cartage, commissions on mops, and of your general expenses apportionable to the mop department in your business?

Ans. It does contain an average of freights and commissions and a sufficient allowance to cover cartage and other items of general expense, as near as I am able to make it.

Ques. Is the aggregate amount of your sales of mops from March 13, 1874, to May 7, 1875, and of your sales of other hardware during the same period, truly and correctly stated?

Ans. I believe it is.

Ques. Are the estimates that you have made under the head of general expenses correctly made, and do they include the whole of such general expenses?

Ans. I believe they are correctly made and include the whole of the expenses, having made an allowance of three hundred dollars to cover small expenses not enumerated.

Ques. State what is the estimate, based upon the mops actually made by you during the period last named, which you make of the cost of the mops made by you per dozen and per gross.

Ans. I estimate that my mops cost me to make, sell, and deliver during the period named ninety-four cents and twenty-four hundredths

218 per dozen, or eleven dollars and thirty cents and ninety-nine hundredths per gross.

Ques. Have you also made an estimate of what the mops made by you and the mops made by the defendants covered by the account A would have cost you during the period specified if you had made and sold the entire quantity?

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.—G. J. S.

Ans. I have.

Ques. Will you produce the paper?

Ans. I here produce the paper.

(Paper offered in evidence, marked "Complainant's Exhibit No. 3."

Objected to by defendants as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.—G. J. S.

Ques. Is this a correct and true estimate of what the materials, labor, freight, commission, and other expenses would have been, and of the general expenses apportionable to the mop department, assuming that you had made the quantity of mops specified in the estimate?

Ans. I believe it is.

Ques. Is this paper marked "Complainant's Exhibit No. 3" a correct estimate of what it purports to cover, and of the whole of the same?

Ans. I believe it is. It is as near as I am able to make it.

Ques. Have you prepared a summary statement, based upon your previous figures put in evidence, of your aggregate damages by reason of the making and sale *of* by the defendants of the mops covered by Exhibit A?

(Objected to by defendants' counsel as incompetent and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

219 Ans. I have, and here produce the paper.

(Paper offered in evidence, marked "Complainant's Exhibit No. 4."

Objected to by defendants' counsel as incompetent and immaterial.)

(On the margin:) Same ruling. Exception for def'ts.

Ques. Have you made a computation upon the figures given in the account marked "A" of the aggregate amount of the defendants' invoices, and of the freight paid, and of the net amount received by them, of the average price per dozen and per gross of the mops sold by them, and of the average freight and net receipts per gross and per dozen on the same?

Ans. I have.

Ques. Is that the paper?

Ans. It is.

(Paper produced and offered in evidence, marked "Complainant's Exhibit No. 5.")

Ques. Do you know the date of the commencement of this action?

Ans. It was about the 7th day of May, 1874.

Ques. Previous to that date had you had interviews with the defendants relative to your patents set forth in the bill of complaint in this action?

Ans. I had had several interviews with them before that date in regard to my patents.

Ques. How many different interviews?

Ans. I went to their factary or office three or four times to talk with them on the subject, besides having some conversations with them on the subject at other places.

Ques. Fix, if you can, the dates of those interviews, as nearly as may be.

Ans. I think two of them took place at their shop, in the latter part of the year 1873, as I heard they were preparing to make mops, and
220 went to see them, taking my patent papers referred to in the bill of complaint with me. Not meeting all of them at the first interview, I went again, and during the two interviews saw all of the members of the firm; think I saw all the members of the firm, all four of them.

Ques. State the substance of these interviews.

(Objected to by defendants' counsel as incompetent and immaterial.)

(On the margin:) Objection sustained. Exception for pl'ff, it not appearing that this interview has any bearing on the question before this master for decision.

Ans. I took my patent papers with me and offered to show them to them—did show them to them—and told them that the mop I understood they were about to manufacture was an infringement of my patents, and asked them to read my patents and examine them, and not to begin manufacturing mops in infringement of them. The other interviews were, I think, in the spring of 1874, as I again heard they were preparing to begin the manufacture of mops. During these two interviews and the two previous ones I saw all the members of the firm, and offered to show them my patents, and warned them not to begin to infringe them, and told them if they did I would begin legal proceedings against them.

Ques. What response in your first interview did the defendants make to your communication?

(Objected as incompetent and immaterial.)

(On the margin:) Objection sustained and evidence excluded. Exception for pl'ff.)

Ans. One of them took up the patent papers I produced and looked at them, and looked them over a little and handed them back to me. I don't remember just what he said, but he gave me no satisfaction as to the question I had asked, if they were going to manufacture.

221 Ques. In either of these interviews was any proposition made by you to submit to counsel skilled in mechanics any question relating to your patents or to their right to manufacture?

(Same objection as before.)

(On the margin:) Same ruling. Exception for pl'ff.

Ans. I don't know that there was at either of these particular interviews referred to, but there was such a proposition made by me before this suit was brought, and they rejected it.

Ques. What was the offer made?

(Same objection as before.)

(On the margin:) Same ruling. Exception for pl'ff.

Ans. The substance of the offer was that we each present our case to a patent attorney by the name of Frazer, who was then acting as their attorney and solicitor, and had acted in that capacity for me; that each of us lay our case, with what evidence we could bring, before him, and each party pay half the expense of procuring his impartial opinion upon the case.

Ques. What answer was made to that offer?

Ans. The offer was not accepted. It was rejected, and they began manufacturing mops, and the suit was subsequently brought.

Adjourned to January 29, 1876, at 10½ a. m.

January 29, 1876. Examination of H. H. Mason, as hereinafter set forth.

February 8, 1876, Mr. Allen, for complainant, appears. Hearing adjourned by consent to February 9, 1876, at 10½ a. m.

FEBRUARY 9, 1876—at 10½ a. m.

Present: Mr. Jas. A. Allen for the complainant; Mr. F. A. Macomber for the defendants.

222 Oliver S. Garretson's examination resumed.

On being cross-examined he said:

Ques. Who prepared your Exhibit No. 1?

Ans. I done the principal part of the work; I prepared it, with assistance.

Ques. What part did you do?

Ans. I gave the names of the customers set down and the amounts they had purchased.

Ques. You took that from what?

Ans. I took the names of my customers and the amounts they had purchased from Exhibit A in this case.

Ques. Was that all you did with reference to Exhibit No. 1?

Ans. I prepared the last sheet on it and put it together and brought it to the office; I examined it carefully to see if it was correct.

Ques. You examined it with what?

Ans. I examined it with reference to the report Exhibit A, and with reference to my books and lists of my customers.

Ques. Do you swear that prior to March, 1874, you had sold to each of the persons named in this list mop-heads of your own manufacture?

Ans. I do swear that I prepared that statement carefully to show that I had sold to each of those parties, and I believe it to be correct; the names of some of the firms had changes, but I believe all that are shown there, all the firms had dealt with me in mop-sticks.

Ques. Do you mean to say they had all dealt with you prior to March, 1874?

Ans. I think they had.

Ques. Did you sell to Schmieding, De Oneich & Co. prior to March, 1874?

Ans. I had; they were large customers of mine in mop-heads.

223 Ques. When did you sell them mop-heads?

Ans. I can't recollect the date; but I had repeatedly sold them before that time, and in considerable quantities.

Ques. Did you sell to S. Cupples & Co. mop-heads prior to March, 1874?

Ans. I had.

Ques. Where is their place of business?

Ans. St. Louis, Missouri.

Ques. In what quantities did you sell to them?

Ans. I sold them in considerable quantities, as they were large buyers; I don't recollect the amounts now.

Ques. Did you continue to sell them mop-heads after March, 1874?

Ans. I don't think I did.

Ques. You know whether you did or not?

Ans. I have no recollection of selling them, and don't think I did sell them after that time.

Ques. Do you know whether Smith, Mason & Co. sold them mop-heads after March, 1874?

Ans. I think they did.

Ques. Smith, Mason & Co. also sold to other individuals and firms named in this list after March, 1874, did they not?

Ans. They did sell some of the parties named there after that time.

Ques. Who prepared Complainant's Exhibit No. 2?

Ans. I prepared it, with ——sistance; with the assistance —— my book-keeper.

Ques. What part did you take in the preparation of Exhibit No. 2?

Ans. I done most of it, with the exception of the writing or copying it; I furnished the items, the amounts, and directed how to prepare it.

Ques. What other things did you manufacture from March 13, 1874, to May 7, 1875, besides mops?

224 Ans. I made blind-hinges, gate-hinges, and latches, window-pulleys, sash-locks and other articles, as well as custom work. I have enumerated the principal articles.

Ques. What other articles did you manufacture during that period besides those you have named?

Ans. I made a few hand-guides for pianos. I began the manufacture of school furniture in the spring of 1875, but can't say whether I sold any in the time enquired about. I think my answer includes all the principal articles of my manufacture.

Ques. What articles did you manufacture and sell prior to March 13, 1874. State the same fully from the fall of 1871?

Ans. I made mop-sticks, blind-hinges, sash-locks, window-pulleys, and began the manufacture of gate-hinges and gate-latches about or before the thirteenth of March, 1874. I also made custom work, which covers small quantities of various articles. I believe that includes all the important items.

Ques. State under what name you have conducted your business since the fall of 1871.

Ans. For a portion of the time it was conducted in the name of O. S. Garretson. It was conducted under the name till about the first of January, 1873 or 1874. Since that time I have conducted it in the name of the Buffalo Hardware Company as a trade name.

Ques. The Buffalo Hardware Company is neither a corporation or an association, is it?

Ans. It is neither.

Ques. Is it a partnership?

Ans. It is not; it is simply the name under which I do business.

Ques. In Exhibit No. 2 does the item of thirty-eight thousand and seven dollars and fifty-three cents represent the whole amount of

225 the receipts of your business, except those from mops, from March 13, 1874, to May 7, 1875?

Ans. It does.

Ques. Does it represent the receipts from custom work?

Ans. It does.

Ques. From what sources did you make up that item?

Ans. It was made up from our books in which we keep accounts of sales, of the goods sold and custom work sold.

Ques. Did you during that period keep accurate books of account?

Ans. We kept books of account, and tried to, and I supposed did, keep them accurately.

Ques. State what the item named in Exhibit No 2 as "labor in tumbling-room, $381.83," represents.

Ans. It represents the wages of the boy or man who worked in the tumbling-room during the period covered by the account.

Ques. Did you hire the man or boy by the day; and, if so, state how much you paid him?

Ans. Sometimes we hired by the day or by the week; sometimes we paid one price, sometimes another; I cannot give the exact amounts; I can't keep the run of all my business in my memory; sometimes we hired a boy by the week and paid him $5.00 or $6.00 per week. I don't think we hired a man; think it was a large boy—between a boy and a man—that we employed most of the time.

Ques. Give the names of the boys and men employed for that period in the tumbling-room.

Ans. I don't recollect the names of but one; think I can give the name of one who was employed during that time; it was Mike Meidenbauer.

Ques. Who was your engineer during this period?

226 Ans. I can't recollect the name of the engineer during that period; I only run a small engine, and employed a young fellow to tend the fire.

Ques. What were his wages?

Ans. I have given the wages paid for engineer during the time in my statement; I don't recollect the exact amount paid at any one time to any party.

Ques. What was the name of your book-keeper during this period, and what was his salary?

Ans. His name was E. C. Schafer. I think a portion of the time I paid him $2.25 per day, and another portion $2.50. I think I must change that and make it $2.50 and $2.75, and possibly a portion of the time I paid him $3.00, as I had an arrangement with him by which the wages changed.

Ques. Was that all you paid or agreed to pay Schafer, directly or indirectly?

Ans. It was.

Ques. Did you keep a separate account during this time of the cost of fuel for boiler and stoves?

Ans. I kept an account during that time of the amounts paid for fuel for boiler and stoves, but not a special or separate account for that one item; not a separate book or set of books, I mean.

Ques. Where is that account?

Ans. The books are at my office in Buffalo—the books which have the account.

Ques. Does that item of $663.34 in Exhibit No. 2 include the amount of coal or coke used during that time by you in melting?

Ans. It does not.

Ques. Of whom did you rent the shops?

Ans. I rented the shops of George Jones or George Jones' Sons.

Ques. At what annual rent?

227 Ans. The rent amounted to four hundred and fifty dollars a year; that was the amount I had to pay them; I furnished them power that reduced the rent $250 annually, leaving it $450.

Ques. Is that amount of $250 a year which you received from George Jones' Sons included in the amount of receipts by you during that period in this account Exhibit 2?

Ans. I did not receive the $250 from George Jones' Sons.

Ques. That sum was deducted from the rent, was it not?

Ans. In paying the rent I paid him enough to make it $450 annually, which I considered to be the amount of rent per annum.

Ques. Did you have a written lease of the premises?

Ans. I did; of a portion of the premises at any rate.

Ques. State what sum you agreed to pay for the premises annually from March 13th, 1874, to May 7th, 1875.

Ans. The total amount would be $700 annually, but the amount that I paid them in the shape of power reduced it to $450.

The attention of witness is called to the item in Exhibit 2 entitled "General expenses on hardware, &c., $2,642.29."

Ques. Of what particulars is that item composed?

Ans. It is composed of a portion of the items immediately above it in Exhibit 2, and was arrived at by prorating the whole amount of the general expenses on mops and hardware.

Ques. The other item of $523.95, called "general expenses on mops," is the remaining amount of the whole general expense of the business, is it not?

Ans. It is a portion of the items above referred to, and was obtained in the same way.

228 Ques. How much capital had you in your whole business?

Ans. I can't answer exactly how much I had invested. My capital was mostly in machinery, stock, and tools, which it is hard to set a money value on.

Ques. Did you have any cash capital?

Ans. I had no cash capital invested in my business, no more than I was using from day to day.

(The question is repeated to the witness.)

Ans. I had accounts due me—money due me—some money in bank, and stock and materials on hand. The cash that I had was varying from day to day, so that I cannot give the amount of cash capital that I had at any one time.

Ques. How much in value, to your best judgment, was the amount of machinery, tools, apparatus, and money invested by you in this business during this period?

Ans. I suppose the tools and machinery used in my general business might be considered worth three or four thousand dollars. I can't give the exact amount, as I never inventoried or set money value on them. As to the amount of money invested, when I began the business I had but little, and all that is now in it was accumulated during the business, or most

all, and what remains in the business is still invested in stock and accounts, so that it is hard for me to set it down as cash invested.

Ques. How much in value was the material necessarily on hand for the prosecution of your general business?

Ans. I suppose I had materials on hand sometimes to the amount of five or six thousand dollars.

Ques. What was the highest amount in value of materials that you had on hand at any one time during this period?

Ans. I have given it as nearly as I can in the previous answer. I hardly think I ever had more than that; generally had less.

229 Ques. Who made the handles for your mops for you?

Ans. Some of them were made by R. S. Warren; some of them were made by Wyman & Parsons; some of them were made by other parties.

Ques. How much did you pay R. S. Warren for the handles, by the thousand, from March 13, 1874, to May 7, 1875? Give the highest price that you paid him therefor.

Ans. I think the highest price we paid him therefor was $18.00 per thousand.

Ques. What was the highest price you paid Wyman and Parsons during the same period?

Ans. Sixteen dollars was the highest I paid them during that period, I believe.

Ques. What was the highest price you paid any person for handles during that period?

Ans. Eighteen dollars was the highest we paid for any, and not many at that price, and Warren was the only one to whom we paid that price.

Ques. How much did your mop-heads weigh per gross?

Ans. About seventy-eight or seventy-nine pounds complete, the wire and rivets included.

Ques. Does that include what you have put down in the account as nails?

Ans. It does not.

Ques. Did you ever weigh a gross of your mop-heads?

Ans. I have.

Ques. What did it weigh?

Ans. It weighed about seventy-nine or eighty pounds. There was a little variation sometimes. That is without the handle.

Witness' attention is called to the item in Exhibit No. 2, "73 lbs. iron, melted, at 1¾ cent," carried out at 1.27\frac{7}{10}$, and is asked:

Ques. How do you arrive at that amount, giving the particulars thereof?

230 Ans. That is an estimate arrived at from the cost of pig-iron and from the expense of melting pig-iron.

Ques. How much was the cost of pig-iron?

Ans. Pig-iron and the iron that I used cost at that time something less than a cent and a quarter per pound, or about that.

Ques. How did you arrive at the expense of melting it?

Ans. I arrived at the expense of melting it by calculating how much I could melt at each heat or each day, and what it cost me to melt each day.

Ques. How did you find out what it cost you to melt each day?

Ans. Taking about the amount of fuel used each day, the amount of iron to be melted, and the amount paid for a man to tend the furnace, the cost of power to make the blast, I could get at it very accurately.

Ques. How do you know it took exactly 73 pounds of iron to make a gross of mop-heads?

Ans. By weighing the castings for a gross.

Ques. Do you mean the castings made for the different parts of the mop-head?

Ans. I mean all of the castings—enough to complete a gross of mop-heads.

Ques. Exactly how much iron, before it was melted, would it take to make the castings for a gross of mop-heads?

Ans. It would take about 73 pounds.

Ques. Would there not be a loss in melting and casting?

Ans. There would be but little, if any, as the iron is bought by the gross ton, viz, 2,240, and sometimes 2,268 pounds to the ton. In my estimate I allowed abundantly for all loss in melting.

231 (The last part of the answer is objected to by the counsel for the respondent as not called for, and he moves to strike it out.)

(On the margin:) Objection overruled and motion to strike out denied. Exception for def'ts.

Ques. The amount of rivets per gross is one and one-eighth pound, as appears from Exhibit No. 2; was that arrived at from an actual and accurate weighing of the rivets?

Ans. It was.

Ques. Did you weigh them?

Ans. I believe I did; saw them weighed.

Ques. Did you see the wire weighed?

Ans. I did.

Ques. What size wire did you use?

Ans. Number seven.

Ques. Where did you buy it?

Ans. Massachusetts.

Ques. Of whom?

Ans. Sometimes I bought of the Washburn and Moen Manufacturing Company; sometimes of George W. Prentiss. I don't know as I bought of any one else.

Ques. What time during this period did you take for the fixing of the price of the wire?

Ans. I think I bought the wire at that price during all the period, if not at a less price for a portion of the time.

Ques. Did you buy any wire during this time of Washburn and Moen at as low a price as six cents a pound?

Ans. I think I did; not sure but I bought it as low as 5½ during a portion of the time. I now buy it at 5½.

Ques. Was not the general price of wire of this class of wire sold by Washburn and Moen seven cents a pound or upwards during this period?

Ans. I don't know what the general price was. It may have been nominally seven cents a pound.

Ques. Was this wire known as mop-wire?

232 Ans. I don't know that it was especially known as mop-wire.

Ques. Is there not a difference in quality and price between what is known in the trade as mop-wire and common wire of the same size.

Ans. I am not aware that there is a wire known in the trade as mop-wire. There is a difference in the price of wires of the same size.

Ques. Was this billed to you as common wire?

Ans. I think it was usually billed as charcoal wire.

Ques. Did you pay the freight on the wire which you bought of Washburn and Moen, and, if so, is that included in the estimated price of six cents per pound?

Ans. I don't recollect now whether we paid the freight or not, or whether it was delivered to us by the manufacturers. If we paid the freight, I don't think it is included in that estimate.

Ques. What sort of twine do you use in tying up the mops?

Ans. I believe it is called a broom twine or a spring twine, or something like that.

Ques. Of whom did you buy it?

Ans. Sometimes we buy of Pratt & Co., sometimes of Woodruff, both of Buffalo. Can't tell of whom we bought at that time.

Ques. What was the general market price of this class of twine at that time?

Ans. I suppose it was about nineteen cents—such as we used.

Ques. In how large quantities of wire do you make your purchases?

Ans. From 50 to 100 bundles.

Ques. How many pounds in a bundle?

Ans. About sixty-three pounds, I believe, is a bundle of wire.

233 Ques. How do you arrive at the estimated expense of the copper and stain used upon the mops?

Ans. It is a very small item of expense in the manufacture, and I arrive at it by taking the number of mops that I copper and handles that I stain, and the cost of materials used during the time.

Ques. Who printed your labels during that time?

Ans. Matthews & Warren or the Courier Company; perhaps Baker, Jones & Co. may have done some.

Ques. Did you not pay or agree to pay them more than thirty-five cents per thousand for printing your labels?

Ans. I think thirty-five cents is as much as I have paid for several years; have had a great many printed at that price.

Ques. Was your moulding done by the piece or the day?

Ans. It was done by contract; not by the day.

Ques. What was the contract?

Ans. The contract was that the moulder should mould the mops and pay the core boy for making cores, and we were to pay him a certain price or prices, which exact amount or amounts of price I do not now remember just how it was arrived at, but we had an agreement with the man that he should make the mops and receive the price, viz, ninety-nine cents, on the mops that we sold; I mean ninety-nine cents per gross. I refer now to the cross-heads.

Ques. Did the moulder mould by the pound; and, if so, how much was he to receive by the pound?

Ans. He did not mould by the pound; he moulded by the gross.

Ques. How much was he to receive by the gross for moulding the cross-heads?

Ans. He was to receive ninety-nine cents per gross.

234 Ques. For all that he moulded or for all that you sold of his moulding?

Ans. For all that we sold of his moulding.

Ques. When was that contract made with the moulder, and during what times was it in force and effect?

Ans. I don't recollect the day it was made; it was not a written contract, I believe, but it was in effect during the time covered by this accounting.

Ques. During the whole time covered by this accounting?

Ans. I believe so.

Ques. What was the name of that moulder?

Ans. I don't now recollect.

Ques. Who moulded the collars?

Ans. The collars were generally moulded by an apprentice boy.

Ques. Under what arrangement with the moulder, whether by the day, by the piece, or gross? State full particulars thereof.

Ans. They were moulded by the day or by the year, as we hired our 'prentice boys by the year usually.

Ques. Who did you employ to put up and box the mops?

Ans. A man named Bauer, Fred Bauer.

Ques. Did he put them up and box them by the gross?

Ans. He did all the labor of making the mops by the gross, the castings being furnished him.

Ques. Did he rivet the mops?

Ans. He did.

Ques. Did he bend and shape the wire?

Ans. He did.

Ques. Did he put the nick in the wire?

Ans. He did.

Ques. Did he straighten the wire before cutting it?

Ans. He did.

Ques. Did he tumble the castings of the mop-heads?

235 Ans. He did tumble the mop-heads, all of them.

Ques. The tumbling was done before they were coppered, was it not?

Ans. He tumbled them in order to copper them.

Ques. Were the handles chucked or fitted to the socket when you bought them?

Ans. They were chucked, but they required rechucking.

Ques. Did Bauer rechuck them?

Ans. He did.

Ques. Did he stain the handles?

Ans. He did.

Ques. How much were you to pay him for all that?

Ans. I was to pay him a dollar and twenty cents per gross for all the work on making the mops.

Ques. Did you furnish him any assistance?

Ans. I did not. He furnished and paid his own assistance.

Ques. How many gross can one laborer rivet in a day, giving to it an ordinary day's work?

Ans. I don't now recollect; I should judge from six to ten gross. I have not paid much attention to it lately, having contracted for them for a long time.

Ques. Was Mr. Bauer employed by you during this time in any other duties than putting up and boxing the mops?

Ans. He worked almost exclusively at other things, only overseeing the making of the mops.

Ques. State whether or not in moulding mop-heads there is a loss by reason of defective moulding and the breaking of castings; and, if so, state as nearly as you can the percentage of such loss to the whole amount of the castings of the mop-heads.

Ans. There is some loss—some pieces that do not come out per-
236 fect that have to be remoulded. Should estimate that loss at from 5 to 10 per cent. to the moulder, owing to how carefully he does his work.

Ques. State whether or not in the business of manufacturing and selling mops there is a loss by reason of bad debts; and, if so, state the percentage of such bad debts to the whole amount of the sales, as nearly as you can.

Ans. There is a loss sometimes, but it is very light in proportion to the whole amount sold. I have not averaged it, and could only guess at the per cent.

Ques. Give the percentage as near as you can.

Ans. It might be from one-half to one per cent. It might be more. I don't think I lost that amount during the time covered by this inquiry.

Ques. The amount put down in this Exhibit No. 2 of mops sold by you, of $7,536.70, represents the sales of your mops, but not the amount collected from such sales, does it not?

Ans. It does not. It represents the amount actually collected.

Ques. Does this statement anywhere contain any item showing the amount of sales of mops which was not collected by you?

Ans. It does not.

Ques. What was the lowest price at which you sold your mop-heads prior to March, 1874?

Ans. A dollar and twenty-five or a dollar thirty-five cents per dozen.

Ques. Did you make many sales at that price?

Ans. I think I sold a good many mops at a dollar thirty-five.

Ques. Did you employ traveling agents to sell your manufactures from March 13, 1874, to May 7, 1875?

Ans. I had a man who sold mops for me on commission at that time.

Ques. What commission did you pay him?

237 Ans. The first part of the time I paid him five per cent.; afterwards seven and a half, I believe.

Ques. Was that the highest you paid him?

Ans. It was.

Ques. State whether or not there was not much depression in business generally in 1874 and 1875.

Ans. There was not in the business I was engaged in in the year 1874. There was somewhat of depression in my kind of business in 1875.

Ques. Did you make the same effort from March 13, 1874, to May 7, 1875, to sell your mop-heads that you had made prior to that time, or have since that time?

Ans. I paid my man more commission during that time, in order that he might afford to make more effort to sell.

Ques. Did you make as great efforts in other respects to sell your mop-heads as you had prior to the time that the defendants began to manufacture mop-heads?

Ans. I believe I made the same effort, as my sales had principally been made by this man, those that were made by traveling. There was a time before the year 1872 that I made a greater effort than at any time since.

Ques. Did you not say in substance to the defendant John K. Clark, or to Edwin L. Ferguson, some time during the past year, and after the injunction in this case was issued, that while the defendants were making and selling their mops you did not make any efforts to sell yours, but determined to avail yourself of the profits, or some part thereof, made by the defendants in selling what you claimed to be an infringing article?

238 Objected to on the ground that the counsel is bound by the witness' previous answer, being matter drawn out by him, and that he cannot produce impeaching evidence or lay a foundation for impeaching evidence by matter contradictory of answers drawn out by himself.)

(On the margin:) Objection overruled and evidence admitted. Exception for complainant.

Ans. I did not make such a statement or substantially such a statement.

(Adjourned to 9 a. m., February 10.)

FEBRUARY 10, 1876.

Parties and counsel present.

Cross-examination of Oliver S. Garretson resumed.

Ques. What, if anything, did you say to them, or either of them, on that subject?

(Objected to as immaterial and irrelevant; that the proper form of question is to ask the witness whether he said the particular thing claimed, specifying it.)

(On the margin:) Objection overruled. Exception for complainant.

Ans. I said to one of them in substance that as their price was lower than mine for mop-heads, that it was but little use for me to go to the trade to offer mops, as it was a damage to my other business.

Ques. Was that the whole of what you said to them on that subject?

Ans. That was the whole of the substance, I believe.

Ques. State the number of mop-heads sold by you from May 7th, 1875, to July 1st, 1875.

Ans. I have not the number and don't recollect.

Ques. Give your best opinion on that subject.

Ans. It may have been in the vicinity of seven to eight hundred dozen. It is only a guess.

239 Ques. Would you not say that it was much less than seven to eight hundred dozen?

Ans. I gave as near a guess as I could give without referring to my books. May and June are the best months, or as good as any.

(Defendants' counsel offers in evidence the agreement between complainant and Smith, Mason & Co., dated November 10th, 1871. Counsel for complainant objects to the admission of the paper generally in evidence, and claims that if the paper is offered for any special purpose the purpose must be stated by counsel for the defendants.)

(On the margin:) Objection overruled. Exception for complainant.—GEO. J. S.

(Received by copy and copy marked "Defendants' Exhibit B.")

Ques. You received money under that contract from Smith, Mason & Co. from time to time, did you not?

Ans. I did.

Ques. How much up to July 1st, 1875?

Ans. I received fifteen thousand five hundred and seventy-four dollars and fifty-two cents, which includes the amount due and settled in notes up to that time, as well as money.

Ques. When was the settlement made?

Ans. We have had various settlements.

Ques. When was the settlement made for sales up to July 1st, 1875?

Ans. It was January 29th, 1876.

Ques. Was that after Mr. Mason had been examined as a witness in this proceeding?

Ans. It was.

Ques. Did he pay you any money then?

Ans. He did not. He gave me some notes.

Ques. What notes did he give?

240 Ans. He gave me two notes of six hundred dollars each; there was another note of about six hundred dollars that he did not give me, as he wished to fix the date after he got home—the date of payment.

Ques. Did he give you any other commercial paper or valuable thing?

Ans. He did not.

Ques. Did these notes or any part of them embrace sales made since July 1st, 1875?

Ans. I believe a portion of them did embrace some sales beyond that, estimated up to the 31st of December, 1875; but the total amount I gave as having been paid me was up to the 1st of July, 1875.

Ques. When did Smith, Mason & Co. pay you money under that contract for sales to be accounted for July 1st, 1875?

Ans. They never paid me money in the shape of money; they always gave me notes; I don't recollect the date of the payment previous to this last one. This payment mentioned of about two weeks ago was payment for the time inquired about.

Ques. When did Smith, Mason & Co. pay any note which they had given to you on their accounting for sales up to July 1st, 1875?

Ans. Do you mean any time within the whole time covered by the agreement?

Ques. You are aware that the contract calls for accountings on the 1st day of July of each year?

Ans. I am not aware that it does.

Ques. Are you aware that the contract calls for an adjustment of accounts semi-annually for sales made up to January 1st and July 1st of each year?

Ans. I am.

The above question repeated as follows:

241 Ques. When did Smith, Mason & Co. pay any note which they had given to you on their accounting for sales up to July 1st, 1874?

(Counsel for complainant objects to the question because it does not definitely inform the witness, in answer to his inquiry, whether or not the question is intended to be limited to the half year ending July 1, 1875, or is intended to cover the whole period under the agreement previous to that date.)

(On the margin:) Objection overruled. Exception for complainant.

Ans. If you mean in settlement for the last half year preceding July, 1875, then I would say they have not paid any note to that time, as I have just stated they gave the note about two weeks ago.

Ques. Please state the exact amount of money which you have received under that contract from Smith, Mason & Co., whether the same was paid to you in cash or whether collected upon notes which they had given to you therefor.

Ans. I cannot give the exact amount in cash which I have received, as I have received some cash and have some notes. As I stated, the total amount that they had paid me in notes, and possibly including a little merchandise, was $15,574.52 up to the 1st of July, 1875; I mean that was the amount due on sales made previous to that time. I couldn't state the exact amount of cash.

Ques. State the amount as nearly as you can.

Ans. It is about twelve thousand; from five to seven hundred dollars, in that vicinity; that's as near as I can state it.

Ques. In the year 1874 did you buy a lot of elm mop handles from the Michigan Manufacturing Company, of Kalamazoo; and, if so, state about the amount thereof?

Ans. I bought a lot of mop handles of the Rockford Clothes-Pin

242 Company (which was afterwards changed to the Michigan Manufacturing Company, I believe); the lot was thirty thousand.

Ques. Did you not afterwards claim that that lot of mop handles was of inferior quality?

Ans. I did.

Ques. What kind of wood did you use in mop handles generally during the period covered by this accounting?

Ans. Ash principally, I believe.

Ques. How many kinds or styles of mop-heads with which you are acquainted or have information of, whether the same were patented or open to the public, were there in existence from March 13th, 1874, to May 7th, 1875? State the same as nearly as you can.

Ans. I haven't got a list of the mop-heads that were in existence during that time. I have seen a good many different mops in the Patent Office, but don't recollect their names or their features, but can give a list of those that I now think of. There is the Barnes mop, the Randlett mop, the Holmes mop, the Karr mop, the Taylor mop, the Mason and Messinger mop, the Manchester mop, the Sirrett mop, Clark mop, the Garretson mop, the Garretson Niagara mop, the Brown mop, the wooden mop, the two-screw mop, a former mop of Clark's, the English mop, the Valentine mop, the Black River mop; then there was an iron mop, a wrought-iron mop, that

I don't know the name of; also the buckle mop. This list includes mops that I have seen or heard of, and there were probably samples of them in existence at that time, but few of them on sale or in the market. I don't now recall any others.

Ques. Do you know the Seymour mop and brush-holder?

Ans. I think that was put into the market in the spring of 1875, or about that time.

Ques. Was it not in the market to some extent in 1874?

243 Ans. I don't recollect that it was.

(Mop-head is shown witness, and he is asked:)

Ques. Is this not the mop spoken of by you and by the witness Mason as the Manchester mop?

Ans. It is.

(Mop offered in evidence, marked "Defendants' Exhibit C.")

Another mop-head shown witness, and the witness is asked:

Ques. Is this the wrought-iron mop you have referred to?

Ans. The one I have referred to was similar to this.

(Mop offered in evidence and marked "Defendants' Dxhibit D.")

On being re-examined by the complainant's counsel the witness said:

Ques. Is the heading upon Exhibit No. 2 the common form of heading you have used to your bills since you have used the name of the Buffalo Hardware Company as a trade name?

Ans. I believe it is. It is the usual form.

Ques. Has there ever been any secrecy between you and your customers or between you and the public that you were the person doing business under that name?

Ans. There never has been any secrecy in regard to the matter. I adopted the name as a trade name, and put my name on my cards prominently—letter-heads, bill-heads, &c.

(The foregoing question was objected to, before the same was answered, as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ques. State whether the items on Complainants' Exhibit No. 2 specified under the heading of "general expenses" are or are not the actual items of expense during the period designated of your business.

244 Ans. They are the actual amounts as taken from my books.

Ques. State what was during this period the condition of the mop trade, with reference to the necessity for employing in it a considerable amount of capital.

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. The mop trade during that time was in such condition that it was not necessary to employ much capital in it.

Ques. Give the reason why.

Ans. Our sales were mostly made on short time, from thirty to sixty days, and we bought our materials on longer time, and could easily make collections and pay for the materials by the time the payment for the material was due.

Ques. On what time did you usually buy your iron?

Ans. Usually bought iron on four months' time.

Ques. Are the prices contained in Exhibit No. 2, under the head of material, as much or more than the actual prices which your books and your bills show you to have paid for the articles specified during the period referred to?

Ans. They are as much, and in some instances more, than we paid.

Ques. Have you here present with you bills of purchases made by you during this period of handles, rivets, wire, twine, and labels?

Ans. I have, with the exception of rivets.

Ques. What does your bill of wire during this period show your actual rate of purchases to have been?

Ans. It was billed and paid for at five and a half cents per pound.

Ques. Have you since yesterday examined your books to ascer-
245 tain what amount of sales of mops you made during the period covered by this accounting which you have been unable to collect pay for?

Ans. I have.

Ques. What do you find?

Ans. I find that I have made but one bad claim, which amounts to forty-four dollars and sixty cents, which is yet unsettled.

Ques. You were asked on your cross-examination, whether the item on Exhibit 2 of cost of fuel for boiler and stoves included the coal or coke used in melting the iron. If not included in that item, state under what item, if any, of Exhibit No. 2 the coal or coke is included.

Ans. It is included in the item of 73 pounds of iron melted.

Ques. What allowance is made in that item for the cost of melting as distinguished from the cost of iron?

Ans. I made an allowance of about one-half cent per pound for melting, the cost of the iron being about a cent and a quarter.

Ques. In answer to the question on cross-examination what was the lowest rate at which you had sold mops you answered that you had sold them at one twenty-five or one thirty-five per dozen. State when and under what circumstances you sold mops at so low a rate as that?

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. The lowest rate at which I sold mops was in the latter part of the year 1871, when I was in active competition with Smith, Mason & Co., previous to the arrangement with them.

Ques. Have you ever sold at similar rates since that arrangement was made?

246 Ans. I have not sold the Garretson mop at that rate since.

Ques. Was the rate of a dollar and fifteen cents inserted in the contract with Mason as the amount which the manufacturers retained intended merely to represent actual cost of manufacture, or was this amount understood to include a manufacturer's profit in addition to cost?

(Objected to as immaterial, and on the ground that the terms of the contract cannot be varied by parol, and that all negotiations were merged in the contract.)

(On the margin:) Objection overruled; exception for defendants.

Ans. It was understood to include a manufacturer's profit over and above cost.

Ques. Has that item, since the date of your agreement with Smith, Ma-

son & Company, at all times, as matter of fact, represented an element of profits in addition to cost?

(Same objection.)

(On the margin:) Objection overruled; exception for def'ts.

Ans. It has.

Ques. You have stated that in Mason's settlement with you from time to time you received usually notes for your balances; what was the usual period which the notes had to run in your course of business with that firm?

Ans. From 30 to 90 days usually.

Ques. State whether such notes have been duly paid at maturity.

Ans. They have usually; there was one of them, I believe, that was not paid at maturity, by mistake in the mails, but it was paid the next day.

Ques. Have you made examination of the returns made to you by Smith, Mason & Co. under and in pursuance of the contract put in evi-
247 dence by the defendants' counsel to ascertain the number of dozens of mops sold by Smith, Mason & Co. after November 10th, 1871, which were sold under orders which had been given at former competition prices?

Ans. I have.

Ques. What is the amount?

(Objected to as immaterial.)

(On the margin:) Objection overruled; exception for def'ts.

Ans. Three thousand seven hundred and forty-two dozens.

Ques. Sold at what average price?

Ans. Sold at an average price of one dollar and thirty-six cents and a fraction of eight mills per dozen.

Ques. Have you ascertained from the same source the total number of dozens sold by that firm from November 10th, 1871, to June 30th, 1872?

Ans. I have.

Ques. What is it?

Ans. It is eleven thousand one hundred and twenty-five dozens.

Ques. The average amount received per dozen during that period being what?

Ans. The average price received per dozen is one dollar and ninety-one cents and a fraction of eight mills.

Ques. Have you ascertained from the same source the total number of dozens sold by that firm from July 1st, 1872, to June 30th, 1873? If so, state the number.

Ans. I have. The total number of dozens is twenty-two thousand five hundred and thirty.

Ques. At what average price per dozen for that period?

Ans. At an average amount received per dozen of one dollar and ninety-four cents and a fraction of seventy-eight hundredths of a cent.

Ques. Have you in like manner, from the same source, ascertained the number of dozens sold by that firm from July 1st, 1873, to June 30th, 1874?

248 Ans. I have.

Ques. State the number.

Ans. It is twenty thousand eight hundred and eight dozens.

Ques. At what average price per dozen during that period?

Ans. At an average price of one dollar and eighty-three cents and a fraction of about a quarter of a cent.

Ques. Have you in like manner, from the same source, ascertained the total number of dozens sold by Smith, Mason & Co. from July 1st, 1874, to June 30th, 1875?

Ans. I have.

Ques. State what it is.

Ans. It is eighteen thousand two hundred and sixty-five dozens.

Ques. Sold at what average price per dozen?

Ans. At an average price of one dollar and fifty-nine cents and forty-two hundredths of a cent.

Ques. Have you in like manner and from the same source ascertained the total number of dozens sold by that firm from March 13th, 1874, to May 7th, 1875, and the average price per dozen during that period? If so, state what it is.

Ans. I have; the total number of dozens sold is twenty-three thousand three hundred and fifty-four (23,354), at an average price per dozen of one dollar and sixty-nine cents and one hundredth of a cent.

Ques. Have you also ascertained from the same source the total number of dozens sold by that firm during a corresponding previous period to that embraced in the last question, viz, from March 13th, 1873, to May 7th, 1874? If so, state the total number of dozens and the average price per dozen during that period.

Ans. I have. The total number of dozens was twenty-six thou-
249 sand nine hundred and ninety-six (26,996). The average receipts per dozen were one dollar and ninety cents and eighteen hundredths of a cent.

On being again cross-examined the witness said:

Ques. State whether or not you substantially met the prices of Smith, Mason & Co. in the sales made by you after entering into the contract with them?

Ans. I did during most of the period.

Ques. What was the lowest price at which you sold mop-heads after making that contract?

Ans. Up to what time?

Ques. Up to May 7th, 1875.

Ans. I think a dollar ninety per dozen to one large dealer was the lowest.

Ques. Who was that dealer?

Ans. F. P. Wood, of Buffalo.

Ques. When was that sale made and in what quantities?

Ans. I don't recollect the date of the sales or the quantities, but as he was the largest dealer in Buffalo I made him the best price.

Ques. What year was that?

Ans. In the year 1874 or 1875.

Ques. Did Mr. Wood pay you one dollar and ninety cents per dozen for the mop-heads bought by him of you at that time?

Ans. I believe he did; that was the price they were sold at.

Ques. Was there not a reduction made from that price?

Ans. I may have made him a reduction towards the latter end of the period. I now sell him at a less price.

Ques. At what price do you sell him now?

Ans. I now sell him at a dollar and seventy-five.

Ques. Is there any rebate or deduction from that?

Ans. There is not.

250 Ques. Do you remember of making a sale of a large quantity of mop-heads in 1872 or 1873 to Sidney Shepard & Co., of Buffalo; and, if so, state the price at which you sold and the amount which they paid therefor?

Ans. I did not make a sale of mop-heads to Sidney Shepard in large quantities during those years, I believe. I think I had an order taken in 1871 for quite a large quantity, to be delivered along at stated times, and we did deliver them in 1872, some of them, I think. My memory is that the price was a dollar sixty-five per dozen, the goods being sold to them before my arrangement with Smith, Mason & Co.

Ques. Did you deliver any to them in 1873 at that price?

Ans. I don't think I did.

Ques. Did you ever make and sell what you describe as the Garretson Niagara mop?

Ans. I have made and sold them.

Ques. In considerable quantities?

Ans. Not in considerable quantities.

Ques. Is that the mop sometimes spoken of as your No. 2 or 3 mop?

Ans. It was formerly called No. 3. I believe I now number it 2.

Ques. Is that a patented article?

Ans. It is.

Ques. At what price did you sell that mop in 1874?

Ans. I sold that at about an average price of a dollar seventy-five, I should judge.

Ques. Did you sell mop-heads to Pratt & Co., in Buffalo, in 1874, in large quantities?

Ans. I sold them, I believe, but not in large quantities.

Ques. State the lowest price at which you sold them from March 13, 1874, to May 7, 1875.

Ans. I don't think I sold them at less than two dollars per dozen, unless I sold them some of my number two, which I think I did not do.

251 Ques. Did they pay you at that rate, or was there some deduction or rebate from that price?

Ans. I think they paid me in full—two dollars—without deduction or rebate.

Ques. Did they pay you that sum for all they received of you during that time?

Ans. I believe they did. I tried to collect for all. There were none thrown in as a bonus.

On being re-examined by counsel for the complainant, the witness said:

Ques. Was this number 2 or number 3 mop of yours a cheaper mop?

Ans. It was.

OLIVER S. GARRETSON.

Examination taken, reduced to writing, read over to the witness, and by him subscribed before me this 10th day of February, 1876.

GEO. J. SICARD, *Master, Etc.*

HENRY H. MASON sworn for complainant.

Ques. What is your name, residence, age, and occupation?

Ans. My name is Henry H. Mason; my age is fifty-three years; residence is Springfield, Windsor County, Vt.; my occupation is a manufacturer.

Ques. What are you a manufacturer of?

Ans. Principal articles of manufacture are mop-heads and spring clothes-pins.

Ques. Are you one of the firm of Smith, Mason & Co., proprietors of what is known as the Taylor mop?

Ans. I am.

Ques. You are the Mason of that firm?

Ans. I am one of the Ma-ons. There is another Mason—my nephew—connected with the firm.

252 Ques. How long a time have you been a manufacturer of mops and acquainted with the mop trade?

Ans. About thirteen years.

Ques. At what places have you carried on the manufacture?

Ans. At Springfield, Vermont, principally. We have had a branch manufactory at Chicago during the last five years about, managed by our Mr. A. C. Mason.

Ques. Who manages the manufactory at Springfield?

Ans. I do myself.

Ques. When was the firm organized?

Ans. About 1860.

Ques. As manufacturers of mops?

Ans. No; organized to manufacture hooks and eyes. We bought the Taylor patent, or an interest in it, in 1862.

Ques. And since that date the firm have been manufacturers of mops?

Ans. Yes, they have manufactured mops ever since that time, but not exclusively mops.

Ques. And during this period has the Springfield manufactory remained under your charge?

Ans. It has.

Ques. And during this period has your employment as manager of your main manufactory at Springfield made you acquainted with the general condition of the mop trade of the country?

Ans. I believe it has to a large extent.

Ques. From your knowledge and information on the subject during the period of your acquaintance with the trade since 1862, what number of mops have been annually sold in the United States as nearly as you can judge on an average?

Ans. From the best of my knowledge and my belief I should say from twenty to thirty thousand dozen—I think there is now as many as thirty-five thousand dozens.

253 Ques. Have you the data from which you can give for a series of years, say from 1871 up to the present time, the aggregate of annual sales made of the Taylor mop?

Ans. I have a statement from which I could give it very nearly. The statement is all of the Taylor mops, except a small quantity, not exceeding five hundred dozens in a year, which is of another kind.

Ques. Give the statement.

Ans. In 1872 we manufactured and sold twenty-one thousand four hundred and seven dozen mops. In 1873, twenty-one thousand one hundred and thirty-two. In 1874, nineteen thousand nine hundred and five. In 1875, sixteen thousand six hundred and sixty seven. These are all dozens.

Ques. During the period of this last statement what mops, if any, have been in competition with the Taylor mop in the general market of the country?

(Objected to as immaterial by the defendants' counsel.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. No mop that has interfered with our maintaining our prices with the exception of one manufactured by the defendants in this suit.

Ques. State whether during this period there has been any competition in respect to price between your mop, the Taylor mop, and Mr. Garretson's mop down to the time of the Messrs. Clark putting their mop upon the market.

Ans. No; we have had no competition between Mr. Garretson and us since 1871.

Ques. How soon after the Messrs. Clark put their mop on the market did your firm, in order to meet their reductions of price, lower the price of the Taylor mop?

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

254 Ans. I could not give the date of the time when they put theirs on the market, but we was obliged to reduce our Taylor mop at the West in May and June, 1874. We reduced it from two dollars to one dollar and seventy-five, and in some cases a little less.

Ques. What was the cause of this reduction?

(Same objection.)

(On the margin:) Same ruling. Exception for def'ts.

Ans. The cause was from the competition of this mop manufactured by the Messrs. Clark.

Ques. At what date did your eastern house make a reduction?

Ans. We began to make a reduction in September, 1874. We reduced it from two dollars to a dollar and seventy-five cents per dozen.

Ques. From the same cause?

(Objected to as incompetent.)

(On the margin:) Same ruling. Exception for def'ts.

Ans. From the same cause.

Ques. From the close of 1871 down to March, 1874, what other mops, if any, were on sale in the country than the Taylor and Garretson mops, and what was the character of the trade in them, if any?

Ans. There was a mop known in New York State as the Manchester mop, manufactured by Mr. Manchester. It was sold somewhat to the trade. I could not say how large the amount was, but should judge there were two or three thousand dozen sold in 1872 and 1873, but not many in 1874 and 1875. It never interfered with our maintaining our prices on the Taylor and Garretson mops. There was a mop manufactured in

New England, at Winchenden, Massachusetts, called the Spring mop. It sold not generally to the trade. It sold to pedlars. There was a mop manufactured at Lebanon, New Hampshire, but the sale is very limited. I do not know its name, only know it as the Lebanon mop. There has been quite a number of mops started and went out since
255 I have been in the business and never got into the general trade. There were wooden mops manufactured, but the sale is so very limited that we do not consider them in the market to any extent so far as the East is concerned. The West I am not so conversant with.

Adjourned to January 29, 1876, at 9½ a. m.

JANUARY 29, 1876—at 9½ a. m.

Parties and counsel appeared as before.

Examination of Mr. Mason resumed.

Ques. How were the mops named in your last answer, so far as they had a market, sold as compared with the Taylor and Garretson mops?

Ans. The Manchester mop sold generally about twenty-five to fifty cents per dozen less than the Taylor. It was so in regard to the Spring mop, so called. The Lebanon mop, as near as we could ascertain, was the same, about twenty-five to fifty cents less. The wood mop was generally sold in market at about six or seven dollars per gross, which would be fifty cents cents or upwards per dozen.

Ques. How did the cost of making the mops you have named compare with the cost of manufacturing the Taylor and Garretson mops?

(Objected to by defendants' counsel on the ground that it does not appear that the witness knows the cost of making these mops.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. To the best of my ability to judge I should judge that the Manchester mop would cost about the same as the Taylor or Garretson mop, and it would be my estimation that the Spring mop would cost about the same; the Lebanon mop I should judge would cost very near if not quite as much as the Taylor. The wood mop, I don't know as to the cost of that.

256 Ques. Have you made an estimate of the cost of manufacturing the Garretson mop? If so, state the result of your estimate and the manner of arriving at it.

Ans. I know the cost of the Taylor mop. From the cost of the Taylor mop I estimate the cost of the Garretson mop, in my judgment, which I think would cost from five to six cents less than the Taylor, the Taylor mop costing us about ninety-five cents per dozen. It costs that at Springfield, Vermont.

Ques. In this estimate of the cost of the Taylor mop are materials, labor, general expenses, and freight included?

Ans. Freight is not. General expenses are estimated from what we consider it would cost to manufacture the mop separate from our other manufactures. Materials and labor are included.

Ques. In regard to general expenses I understand your answer to be that you apportion your general expenses upon the mops in proportion to the amount of sales of mops as compared with the amount of sales of other manufactures. Is this correct?

(Objected to as leading.)

(On the margin:) Objection overruled.

Ans. In making up our general expenses we look over our business and charge to each department what we consider belongs to each department. I can't say that it was proportioned to the amount of sales.

Ques. Can you state substantially what the basis was?

Ans. The basis was the amount which we considered belonged to each department, using our best judgment.

Ques. Can you give about the average sale of mops in the United States at large for a period of five years back? And, if so, what has it been in your judgment?

(Objected to as incompetent and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. To the best of my judgment it would amount to about thirty-five thousand dozens annually.

257 Ques. In a previous answer that you gave you said that after the defendants commenced their sales of mops in 1874 the price of the Taylor mops was reduced to about a dollar and seventy-five cents per dozen. Was this reduction all at once or gradually?

Ans. Gradually.

Ques. Give about the dates, as nearly as you can remember, and amounts of the reductions made.

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. In Chicago we were obliged to begin to reduce in April, small amounts, say, ten cents on a dozen; then twenty cents, to a dollar eighty cents, and then to a dollar seventy-five. In the course of three months we got down to about a dollar seventy-five cents. Some were sold to a few customers at a dollar seventy-five cents before the three months. At Springfield we commenced the reduction in September, and reduced about in the same proportion on the first reductions, and in the course of three months got the price down to a dollar seventy-five cents in New York City and State. In New England we were not obliged to go down quite so fast, and think we did not sell less than a dollar eighty for six months from September, 1874.

Ques. After the Taylor mop had established for itself a general trade in the United States what was the first mop that entered into serious competition with it in the market?

(Objected to as incompetent and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. The mop patented by Mr. Clark and Mr. Garretson in 1866 was the first mop that obliged us to reduce our prices.

Ques. Give the date of this competition, and how long it lasted.

Ans. We began to feel it in the latter part of 1866, and it was
258 affecting our trade so seriously that in the spring of 1867 we negotiated with the parties then controlling the patent, Messrs. Clark & Shepard, for an interest in it, whereby we were to control the patent for six years.

Ques. State what was the next competition to the Taylor mop made in the market.

(Same objection as last above made, as incompetent and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. It was a mop manufactured by Mr. English, of Buffalo; a mop patented by Mr. Clark and made by Mr. English under some arrangement of which I do not know the particulars.

Ques. How long did that competition continue, and what was the date of it?

Ans. I think it commenced in the fall and winter of 1867 and 1868, and I can't give the date of its termination. It ended by our buying Mr. English out. I think it was the winter of 1868 and 1869; am not sure.

Ques. What was the next competition which your mop met with in the market of any importance?

(Objected to as incompetent and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. A mop manufactured by Mr. Garretson, commencing in 1869, some time in the summer or fall; I can't give the date.

Ques. And ending when and how?

Ans. Ending in 1871, November, 1871, by arrangement with Mr. Garretson, the complainant, whereby we combined to make our prices correspond in market.

Ques. What was the next competition of any importance which arose in the mop market to your and Mr. Garrison's mops?

(Objected to as incompetent and immaterial.)

(On the margin:) Same ruling. Exception for def't.

Ans. It was from the mops made by the defendants.

259 Ques. Since your arrangement with the complainant, Mr. Garretson, in 1871, has there been any other mop in the market than the defendants' mop making any considerable or serious competition to the Taylor and Garretson mops?

(Objected to as incompetent and immaterial.)

(On the margin:) Same ruling. Exception for def'ts.

Ans. There has not.

(A mop-head is shown witness.)

Ques. State whether the mop-head shown you is a sample of the mops made and sold by the complainant since 1871.

Ans. It is; known as the mop No. 1.

(Mop-head marked "Complainant's Exhibit No. 6," and put in evidence.)

(Another mop-head is shown witness.)

Ques. State whether this is a sample of the competing mop sold by the defendants.

Ans. This is one of them, the principal one that I have seen.

(Mop-head marked "Complainant's Exhibit No. 7," and put in evidence.)

Ques. Supposing these two mops, Exhibit No. 6 and Exhibit No. 7, in the market together, what preference, if any, would there be to the buyer in favor of either as against the other?

(Objected to as incompetent and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. The working of the trade and our experience of it has been that there would be none only the price.

Ques. Would either one as against the other have an advantage if sold at a lower price than the other?

Ans. The one that sold at the lower price would have the advantage in market.

On being cross-examined by the counsel for the defendants, the witness said:

260 Ques. When did you buy your interest in the Taylor mop, and what was that interest?

Ans. In 1862; the interest was, we bought three undivided fourth parts of the patent.

Ques. Had you previous to that time manufactured under that patent?

Ans. No.

Ques. Had you previously been engaged in the manufacture of mops?

Ans. No.

Ques. Had you previously had any experience in the mop trade?

Ans. We had to a limited extent.

Ques. What mop had you handled?

Ans. A mop manufactured by Mr. Taylor, the patentee of the Taylor mop.

Ques. State fully the contract and arrangement entered into between you and the complainant in 1871, in regard to conducting the mop business.

Ans. We agreed to make our prices uniform in market, and to be bound to the price agreed; that we couldn't lower or change the price without each other's consent; to keep an account of our sales and report to each other, so each one should know what the other was doing. That was the substance. At the end of each six months we were to make a comparison of our sales, the one that sold more in the market than the other was to pass to the party selling the less enough to equalize the trade between us; there was no specified amount to be so transferred, but enough was to be transferred to equalize the profits of the trade between us. That is the best I can convey of it without having the agreement by me.

Ques. In pursuance of that agreement did your firm and the complainant from time to time look over your respective accounts of sales, and, if so, with what comparative results?

261 Ans. We have looked over or had a settlement from time to time as agreed. The result has been that we have sold more mops than Mr. Garretson; that was the result on each looking over, and we have paid him to his satisfaction the difference in the profits arising from the sales.

Ques. How much was that difference which you paid, stating the same both by the gross and by the dozen?

Ans. I could not give it here without referring to my books.

Ques. Can you give about the amount, according to your best recollection?

Ans. I cannot.

Ques. Can you approximate the amount?

Ans. I cannot.

Ques. Have you any recollection on the subject?

Ans. I have.

Ques. Give that recollection.

Ans. Since the time of our entering into this arrangement up to July 1, 1875, we have paid Mr. Garretson about ten thousand dollars.

Ques. That arrangement was entered into at what time?

Ans. November, 1871; think it was November 10, 1871, but am not certain.

Ques. You say about ten thousand dollars; is your best recollection that the amount was over or under that sum?

Ans. I could not say either way; I give that as a sum that is near the amount; it is in that vicinity; it may be more; it may be less.

Ques. At about what sum per dozen of the excess of your sales over the complainant's sales would this gross sum of ten thousand dollars represent? Give it as nearly as you can.

262 Ans. That would depend upon what the mops sold for. I could not average it without looking at our settlements.

Ques. What would it be if the mops sold for one dollar and seventy-five cents per dozen?

Ans. I should have to answer the same way; I could not tell without looking at the settlements which we have made from time to time.

Ques. Were those settlements made on the basis of the number of mops sold, numbered by the gross or by the dozen?

Ans. By the dozen.

Ques. And do you now say that you have no recollection of the amount by the dozen paid by your firm to Garretson at any time during the continuance of that arrangement?

Ans. I do not have the recollection so that I can give it here.

Ques. Is your recollection such as to enable you to make an estimate of it?

Ans. I could approximate.

Ques. Please give the approximation.

Ans. On mops sold at a dollar and seventy-five cents it would be from forty-five to fifty-five cents; in the same proportion on mops sold at two dollars it would be from sixty to eighty-five cents. I only approximate this statement that I make; it may be more, it may be less.

Ques. How much of this from forty-five to fifty-five cents per dozen was paid over to Garretson as representing his interest in the trade?

Ans. I could not tell without reference to the books, only in the general estimation which I give in the sum total in answer to a former question.

Ques. State the whole amount of your sales, as nearly as you can, from the time of your entering into the agreement with the complainant down to the first of July, 1875.

263 Ans. I can't do it without taking the items and working them over.

Ques. What was the number your firm sold of the Taylor mop in November and December, 1871, as nearly as you can now estimate it?

Ans. I could only give it by approximation. Judging from our usual sales monthly, it would be about twenty-five hundred dozen for the two months of November and December.

Ques. Of the sixteen thousand six hundred and sixty-seven dozen which you say your firm sold in the year 1875, what part was sold by you in that year prior to the first day of July? State the same as nearly as you can now recollect it.

Ans. Probably about half of the amount, being half of the year; might have been some more than half, being the first six months; couldn't tell without looking at the returns made.

Ques. Are you acquainted with the Seymour mop and brush-holder?

(Objected to as irrelevant by the complainant's counsel.)

(On the margin:) Objection overruled. Exception for compl'nt.

Ans. I have seen the article.

Ques. What is it?

Ans. It was put into the market as a mop and brush-holder combined.

Ques. Where is it made?

Ans. I believe at New Britain, Connecticut.

Ques. By whom?

Ans. That I couldn't tell; the label says Corbin. I don't know the given name.

Ques. When was this combined mop and brush holder put into the market?

Ans. I could not tell when. I saw it in the spring of 1875.

Ques. Did you not see it in the year 1874?

264 Ans. Don't remember that I did. I might have seen it in the latter part of 1874.

Ques. Is not that combined mop and brush-holder having a pretty extensive sale?

Ans. It has been put into the market to some considerable extent. The experience that I have in New England and the trade that I reach is that the sale is somewhat limited.

Ques. There is a house in the city of New York having the sale of it, is there not?

Ans. I understand that the manufacturers have their headquarters at New York.

Ques. Does your firm make and sell mops with brush-holders?

Ans. We make a brush-holder that we call combination brush and mop holder.

Ques. How long have you made them?

Ans. We made some in 1867 and 1868, but those we called only for the brush. The sale was very limited, and they went out of the market. In 1875 we made another kind (in the spring of 1875), which we called a mop and brush-holder, and sold a few hundred dozen.

Ques. What is the market price of this combined mop and brush-holder?

(Objected to as irrelevant by the complainant's counsel.)

(On the margin:) Objection overruled. Exception for compl't.

Ans. What we have sold, sold at the same price that we sold the Taylor mop at. When we sold the Taylor mop at $2, we sold this at $2, and when we sold the Taylor mop at $1.80 or $1.75 we sold this at $1.80 or $1.75.

Ques. What was the market price of the Taylor mop in 1875?

Ans. We sold generally for a dollar seventy-five. We had no market price in the forepart of 1875, but sold to meet competition.

265 Ques. When, if at any time, have you sold the combined mop and brush-holder for two dollars per dozen?

Ans. I could not say.

Ques. When have you sold it at a dollar eighty?

Ans. I couldn't give the time. The best I could answer that question is that we sold at the same price that we sold Taylor mop for at the time the mop and brush-holder was sold.

Ques. You say that you began to manufacture the combined mop and brush-holder in the spring of 1875; now, have you sold it in the market for more than one dollar and seventy-five per dozen?

Ans. I could not tell whether we have sold any for more than a dollar seventy-five without referring to our books.

Ques. Did not your firm, prior to May, 1874, reduce the price of the Taylor mop in the city of Chicago; and, if so, how much was such reduction?

Ans. I don't know that they did.

Ques. Did you have information that such reduction was made in Chicago prior to May, 1874?

Ans. I don't remember of having any such information.

Ques. Was not a reduction made in the price of the Taylor mop in the city of New York prior to May, 1874?

Ans. I could not tell without reference to our books, but do not think there was.

Ques. Did not your firm sell the Taylor mop to James S. Barron & Co., of New York, or to A. D. Hopping and Wilson, prior to May, 1874, at a reduced price from the former market price?

Ans. I should have to answer the same as I did before; I could not tell without referring to my books.

Ques. Did you not personally see one or the other of those parties prior to May, 1874, and agree to reduce the price of the Taylor mop?

266 Ans. I could not tell as to time.

Ques. Did you at one time?

Ans. Yes.

Ques. When?

Ans. Could not tell as to the time.

Ques. Give me your best recollection.

Ans. It was some time in the summer of 1874, but as to the exact time I could not approximate very near without referring to our books.

Ques. How much did you then agree to reduce the price?

Ans. We made no agreement particularly—only to meet competition.

Ques. Was the price reduced, then, in pursuance of that arrangement?

Ans. It was reduced.

Ques. Prior to March 13, 1874, what was the lowest price at which you had sold the Taylor mop in the market?

Ans. I couldn't give that answer.

Ques. Give me your best recollection.

Ans. When we were in competition with Mr. Garretson and others from time to time we had no price; took whatever the trade would give us; the lowest amount I could not give without referring to our books.

Ques. Have you any recollection as to the lowest price at which you sold these mops?

Ans. I have not.

Ques. Did you at any time sell them as low as one dollar and fifty cents per dozen?

Ans. We have.

Ques. Did you at any time sell them as low as a dollar and twenty-five cents a dozen?

Ans. That I couldn't answer; we might when we were in deadly competition.

Ques. During the year 1874 was there not much depression in the market for builders' hardware?

267 (Objected to as irrelevant. The question should relate to mops and the mop market.)

(On the margin:) Objection overruled. Exception for compl't.

Ans. It is a business I am unacquainted with, and I couldn't give any answer.

Ques. Was there not much depression in trade generally in that year?

Ans. It is so understood, I think, generally by every one in trade, especially in the latter part of 1874.

(The foregoing question and answer are taken subject to complainant's objection as irrelevant and immaterial.)

(On the margin:) Objection overruled. Except'n for compl't.

Ques. Did not such depression continue up to May, 1875?

Ans. I wish to correct my answer to the last preceding question; I misunderstood the year; I supposed you referred to 1875; if I had understood it as being 1874 I would have said there was not.

Ques. Was not the price of pig-iron less in 1874 than 1873?

Ans. That is a matter I am not conversant with; I could not tell.

Ques. Don't you use pig-iron in manufacturing these mops?

Ans. We do not run a foundry; we buy our castings for the mop.

Ques. Who made the castings for you in 1874?

Ans. In Vermont, the Vermont Scythe Snath Company. My nephew has an interest in a foundry in Chicago. Whether they got started so as to furnish them before 1874 I don't recollect. Since they have been running a foundry we have purchased our castings for mops in Chicago of that firm; before that time we got them of other foundries in Chicago, and some here in Buffalo, of Mr. Shepard.

268 Ques. In 1873 how much did the castings cost you at Springfield?

Ans. I could not tell.

Ques. How much did they cost you in 1874?

Ans. I could not remember; I could not tell how much we paid for them at this time without referring to our books.

Ques. Did you buy your castings by the pound in 1873 and 1874?

Ans. We did.

Ques. Do you not recollect that you bought your castings in 1874 cheaper than you did in 1873?

Ans. I could not tell.

Ques. Did you have the management of the manufacturing of your mops for the years 1873 and 1874?

Ans. I had the general management.

Ques. Are you acquainted with Sargent & Co., of New Haven, Connecticut?

Ans. Only by reputation.

Ques. Do you know whether they manufacture a mop or not?

Ans. I do not; they manufactured one some time ago, but whether it is in market now I don't know—I believe it was called the Holmes—that was, I think, the name of the patentee.

Ques. Do you know whether Charles Parker, of Meriden, Connecticut, manufactured a mop in 1873 or 1874?

Ans. I never saw any mop in market purporting to come from him.

Ques. Are you acquainted with mop known as the Alexander Barnes' mop, patented in 1855?

Ans. I have never seen anything of that kind in market, purporting to come under that name.

Ques. Are you acquainted with the Randlett mop, made under the patent granted to T. Randlett, in 1853?

269 Ans. No; I have never seen any such.

Ques. Are you acquainted with the Karr mop, made by the Townsend Manufacturing Company, of Buffalo?

Ans. I have seen a mop purporting to be made by or patented by Mr. Karr; only one sample; I couldn't remember much about it.

Ques. Are you acquainted with the Havens mop, made by James L. Havens, of Cincinnati, Ohio?

Ans. I have seen a mop patented by one Mr. Brown, I think, and manufactured by Mr. Havens.

Ques. How long has that been in market?

Ans. I have never seen it in market.

Ques. Do you not know, or have you not learned, that it has had, and now has an extensive sale in the South and Southwest?

Ans. I do not; and have not heard that there was an extensive sale.

Ques. From the relative amount of sales, do you regard the Taylor mop as the principal mop in the market?

Ans. We think there is more sold of that mop than any other one up to this time.

Ques. And you regard it as a good practical mop?

Ans. We do.

Ques. Is not the Taylor mop light, compact, and easily adjusted to hold the mop-cloth, and not liable to release it in use?

Ans. We think it does it as well as any other mop.

Ques. And your present prices of the Taylor mop in the market are what?

Ans. A dollar and seventy-five cents per dozen generally.

Ques. Have you occasional sales for less than that in price?

270 Ans. In some instances, by the quantity, we have sold them less.

Ques. At the rate of one seventy-five per dozen do you make any rebate for cash?

Ans. There is no rebate for cash payments. The only rebate is on lots of ten cases or more, which in some cases has been made ten cents on the dozen. By this I do not mean that we have never, for the sake of getting money, made a discount for cash on a sale, but that is not the course of our trade.

Ques. When you sell in quantities of ten cases or more you now make a deduction of ten cents per dozen?

Ans. That is what I understand from our house West. I don't know it personally, only as I see it on the returns. We do not make that discount at the East in that form. We give to some parties that have traveling men a commission for taking orders or selling.

Ques. Did you ever manufacture the Taylor mop under a license?

Ans. Not a special license, you might call it. We bought three undivided fourth parts. In connection with that we had a license from Mr. Taylor to work and control the other fourth part.

Ques. Did that license or agreement provide for royalties to be paid by you to Taylor?

Ans. It did.

Ques. How much?

(Objected to as immaterial and irrelevant.)

(On the margin:) Objection sustained. Defendants except.

Ans. It made no provision for any specific amount.

Ques. How, by that arrangement, was the amount of the royalties to be paid to Taylor to be ascertained?

271 (Objected to by complainant on the ground that in answer to a question by the complainant's counsel whether the agreement was in writing the witness had answered that it was. The complainant objects on the ground that the writing should be produced, and also that the subject-matter is irrelevant and immaterial.)

(On the margin:) Objection sustained. Def'ts except. The question here referred to as having been put to the witness by complainant's counsel as to whether the agreement in question was in writing was actually put by him, and the witness answered thereto that it was in writing.—G. J. S.

Ans. The contract provided that we were to manufacture and sell the mop to the best of our abilities and judgment, and after paying for all expense of rents, interest, expense of selling, expense of purchasing any other mops or anything appertaining to the welfare of the business, the net amount received after all losses were taken out, including all salaries and expenses of selling, etc., one-fourth part of the net profit was to be paid to Mr. Taylor.

Ques. And that was the consideration to be paid to Mr. Taylor by you for your whole interest in the patent, including the three-fourths conveyed to you?

(Same objection.)

(On the margin:) Same ruling and exception.

Ans. It was not. We paid Mr. Taylor fifteen hundred dollars for the three-fourths of the patent.

Ques. This was all embraced in one contract, was it?

Ans. It was not. We had a deed of the three-fourths and one other contract appertaining to the other fourth.

Ques. Were not both the deed and the contract made at or about the same time, and both parts of one bargain?

Ans. They were made at the same time.

272 Ques. Was not the deed to you a part of the consideration for your agreeing to pay Taylor one-fourth of the net profits as you have described?

Ans. I could not tell whether that was to be part of the consideration or not. All I can give are the facts and the writings. The contract may recite that the deed was part of the consideration for the other. I can't say whether it does or not.

Ques. Will you produce the contract?

Ans. I would if I had it here.

Ques. Will you produce it or a sworn copy of it to the master?

Ans. If necessary or called on legally I will if I can find the original.

(The defendants' counsel gives notice to the complainant's counsel to produce this agreement at the next hearing. Complainant's counsel answers that the paper is not and never has been in our possession; that the subject-matter is drawn out by the defendants by their examination of the witness, thereby making the witness their own, and we decline to act in reference to the paper referred to either now or later on in the course of this hearing.)

Ques. Where was the paper when you last knew of it?

(Complainant's counsel objects to this and any and all questions concerning the paper as irrelevant and immaterial.)

(On the margin:) Objection overruled. Complainant excepts.

Ans. The original was made by an attorney by the name of John Ward, who was then an attorney at law in Springfield, Vermont, and lodged with him for safe-keeping. Where his papers are now that he left there I couldn't tell. A copy was obtained some time. I don't remember of seeing the paper itself since made or since the copy was obtained.

The lawyer, John Ward, went West. Since thinking of it I
273 would add that Mr. Taylor's administrator may have taken the paper, but I can't say.

Ques. Do you know whether or not that paper was recorded in the Patent Office at Washington?

Ans. I think not, neither that nor the deed.

Ques. Have you or your firm any interest in the patents upon which this suit was brought?

(Objected to as irrelevant and immaterial.)

(On the margin:) Objection overruled. Complainant excepts.

Ans. We have no interest in the patents.

Ques. Have you any license under the patents, or either of them?

(Same objection.)

(On the margin:) Same ruling and exceptions.

Ans. We have no license to manufacture or any interest in the patents other than the contract which I have recited heretofore.

Ques. You feel considerable interest in this suit, don't you?

Ans. No further than relates to our contract to have prices put up.

Ques. In case of a recovery by the complainant of money under the the decree in this case, is it not your expectation that your firm will receive from Mr. Garretson a part of the sum which may be recovered?

Ans. Anything that will come under our contract I expect.

On being re-examined by complainant's counsel the witness said:

Ques. Under that contract has any money ever been paid by Mr. Garretson to your firm heretofore?

Ans. There has not.

Ques. Has Mr. Garretson ever been liable under that contract to pay any money heretofore?

Ans. He has not.

274 Ques. In stating what the contract was between you and Mr. Garretson, in answer to Mr. Macomber's question, did you omit to state some provision of the contract which you now remember?

Ans. I did.

Ques. State what it was.

Ans. In reciting the provisions how the profits that would accrue on

the surplus of our sales over Mr. Garretson I should have mentioned that a price was agreed in the contract of one dollar and fifteen cents per dozen should be the amount that each should retain for all they had sold before, and the net profit on the overplus of the one selling the most was to be made up, after taking out a dollar and fifteen cents from each dozen sold, to the one who manufactured and sold, and all losses that might accrue in the sales so made should be taken out with the dollar and fifteen cents, and all the freights. Then the balance of the net amount of the excess was to be divided equally, so that each should have an equal amount of the net profits after all this had been taken out.

Ques. Was the dollar and fifteen cents the actual cost of manufacturing the mops by either party, or was it so considered in making this contract?

(Objected to on the ground that the contract, which is under the control of the complainant, is the best evidence.)

(On the margin:) Objection overruled. Exception by def'ts.

Ans. It was not the actual cost of the mop, nor was it so considered in making the contract.

Ques. Did this dollar and fifteen cents, going to the one who made the mops accounted for, contain in itself, as a part of the sum, an item of profits in addition to the actual cost of manufacture?

(Same objection.)

(On the margin:) Same ruling and exception.

Ans. It did.

275 Ques. To what amount did that sum of a dollar fifteen cents per dozen represent manufacturer's profits?

Ans. We considered it to us about twenty cents.

Ques. What was the date of the contract between your firm and Mr. Taylor to which Mr. Macomber has called your attention, and to which you have been testifying on cross-examination?

Ans. I think in the spring of 1862; can't give definitely the month and day of the month.

Ques. Is that original paper, to your knowledge, in your possession or under your control?

Ans. It is not.

(A mop shown to the witness.)

Ques. Is that a specimen of the Taylor mop, the manufacture of which you have been testifying to in your evidence?

Ans. It is.

(Marked "Complainant's Exhibit No. 8" and put in evidence.)

Ques. What would be the effect upon the trade in any one year of a high degree of competition in the price of mops, with reference to glutting the market, and so depressing prices for the future?

Ans. It would, in my opinion, have a tendency, and does have a tendency, to induce the trade to stock up, expecting possibly that the inducement that causes the competition would be removed and prices go up. And the result, which we have proved several times, is to lessen the sale of mops for some time after prices are put back and regulated.

Ques. Does this overstocking the market in this way have a tendency to compel the manufacturer to continue to sell at low prices in order to secure a continuance of trade?

(Objected to as speculation.)

(On the margin:) Objection overruled. Exception for def'ts.)

276 Ans. It would if he sold to any extent, I should judge.

Ques. Prior to 7th May, 1875, had Mr. Garretson, the complainant, lowered or reduced his prices below what they had been for the period immediately previous to the defendants putting their article of mop into the market?

(Objected to as immaterial.)

Ans. He had not, of my knowledge.

On being again cross-examined the witness said:

Ques. Have your firm or any other manufacturing establishment, to your knowledge, made mop-heads under a license or some agreement by which a certain percentage called royalty was secured to the patentee or owner of the patent?

(Objected to as immaterial and irrelevant.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. We have not; only in the case I have named—Mr. Taylor. I can't think of any such case in any firm I know anything about. We did have such an arrangement from Mr. Colby, of Waterbury, Vermont, but we never manufactured under it. That was called the Colby mop or the ratchet mop, and that arrangement was made sometime in 1867; can't give the date. Under that arrangement we took a lot of mops they had on hand and sold them out.

Ques. By that arrangement how much royalty was you to pay?

(Objected to as immaterial and irrelevant.)

Ans. It has been so long and the matter proved so unimportant to us that I can't recollect the amount.

On being re-examined by the complainant's counsel the witness said:

Ques. Were the sales made in November and December, 1871,

277 by you mostly under orders given previous to the contract with Garretson, and so made under the old prices?

Ans. They were to a large extent.

Ques. Was the same thing the case to any considerable extent with respect to the sales of the following year, 1872?

Ans. I should think not; could not tell positively without referring to our sales.

HENRY H. MASON.

Examination taken, reduced to writing, read over to witness, and by him subscribed before me the 28th day of January, 1876.

GEO. J. SICARD,
Master, &c.

Defendants' counsel gives notice to complainant's counsel to produce at the next hearing of this matter the written contract between complainant and Smith, Mason & Co. referred to by the last witness.

Adjourned to February 8, 1876, at 10½ a. m.

The complainant rests.

The defendants' counsel moves to dismiss the proceedings on the ground

that no basis has been laid for the master to compute or estimate the complainant's damages, and that consequently the complainant is entitled to only nominal damages.

Reserving that point, the defendants call as a witness—

JOHN K. CLARK, who, being sworn, testified as follows:

Ques. Did you hear the evidence of Oliver S. Garretson, and the whole of it, given on this examination?

Ans. I believe I have.

Ques. You have already stated, I believe, on a prior examination in this proceeding, that you were one of the defendants?

278 Ans. I believe I have.

Ques. Did you hear the evidence of Mr. Garretson to the effect that prior to the commencement of this suit he called on you and your partners and exhibited to you his letters patent?

Ans. I did.

Ques. State whether or not he exhibited to you his letters patent before the beginning of this suit, or requested you not to make mop-heads.

Ans. I have no recollection of seeing his letters patent as shown by him; he did say before the commencement of the suit that he thought he would be compelled to commence prosecution if our firm did not stop the manufacturing of the mop-head which we were then making.

Ques. Did you have an interview with Mr. Garretson in the fall of 1875; and, if so, state the time and place, and who was present at that interview?

Ans. I had an interview with him at our office about the first of November; there were present two members of the firm besides myself, E. L. Ferguson and H. R. Clark.

Ques. What took place between you at that interview, if anything?

(Objected to by complainant's counsel as improper and irrelevant. The defendant cannot contradict the evidence on that subject of the complainant given on cross-examination.)

(On the margin:) Objection sustained. Exception for def'ts.

Ans. Mr. Garretson directed his conversation more particularly to me, and stated that he made no special effort to sell his mops while we were in the market, as he considered we were infringing him, and he informed his customers that he would not meet the price or prices that mops were then being sold at during the period of our manufacturing the so-called

279 improvement; that he considered we were responsible for the infringement, and was so certain of its being an infringement before the final decision of the court was given that he held firmly and adhered strictly to his prices and made no effort to sell his mops unless parties wanted them at the old prices.

Ques. What other business were the defendants engaged in from March 13, 1874, to May 7, 1875, besides the manufacture and sale of mop-heads?

Ans. We manufactured blind-hinges of several patterns and sizes; gate hinges and latches, two different kinds; window-sash pulleys, several different styles and sizes; three or four styles of window-sash locks and sash-cord irons; I believe that was all; no custom work.

Ques. How long had you been engaged in that business?

Ans. The present members of the firm had been together as a firm since the year 1869, in Buffalo; the firm of Clark & Co., under that name,

dates from about 1865—January 1st, 1865—two of the present members only being a part of that firm as it existed from 1865 to 1869.

Ques. Was your business extensive in some or most of these articles you have enumerated?

Ans. We commenced business in manufacturing window-sash locks; then we added the manufacturing of blind-hinges to the business, and the other articles of manufacture from time to time to the present.

Ques. State whether or not there was during the years 1874 and 1875 a depression in the general hardware trade, a depression in the market of the general hardware trade.

Ans. There was a depression in the year 1874, with quite an increase for 1875, prices being very much reduced in 1874 from what they were in 1873, and still more so in 1875, on all goods of our manufacture.

280 Ques. State whether or not during all that time, in order to effect sales, greater efforts had to be used on the part of the manufacturers.

Ans. We found it so; that was our experience and our knowledge, as far as our knowledge went of other manufacturers' business.

Ques. Describe how hard times, so called, affect the sale of manufactured articles of this description.

(Objected to as calling for an abstract dissertation.)

(On the margin:) Objection overruled. Exception for complainant.

Ans. Wholesale dealers bought very little at a time compared with what they usually purchased in ordinary times, and were asking for longer credit, which had to be granted in the majority of such cases in order to effect sales. There was more soliciting. The competitors were constantly offering all the inducements that they possibly could in order to secure orders.

Ques. State whether in the manufacture of these mop-heads the defendants were acting under letters patent or not.

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for complainant.

Ans. We were. We did not manufacture anything that we did not have patented.

Ques. What patents did your firm act under?

Ans. The patents put in evidence and referred to in the printed case as issued to Clark.

Ques. Do you recall the first patent?

(Question withdrawn.)

Ques. Did your firm also have the right to manufacture mop-heads under letters patent of September 2, 1868, granted to Charles B. Clark and E. L. Ferguson?

Ans. I can't say positively, but I think we did.

Ques. Have you prepared the statement showing the cost and expenses of manufacturing the mop-heads mentioned in Exhibit A, together with statement of the profits made by your firm out of that entire business?

281 Ans. We prepared such a statement.

Ques. Who prepared it?

Ans. I had the most to do with the preparation of the statement. Two other members of our firm were also consulted in the preparation, viz, E. L. Ferguson and H. R. Clark.

Ques. From what sources was this obtained?

Ans. From our books.

("Paper is produced and offered in evidence, marked Defendants' Exhibit E.")

Ques. Does this Exhibit E contain a full and accurate estimate of the cost and expenses of manufacturing all of your mops during that period, and the profits realized by your firm from that business, including the whole amount of your sales of all manufactured articles during that period?

Ans. I believe it does as near as it is possible to arrive at it.

Ques. Have you also prepared a separate statement, from the same sources, of the amount received from the sales of the three-part mop, so called, and of profits realized therefrom?

Ans. We have such a statement.

Ques. State whether or not the amount realized from such sales, and the profits thereof, are included in Exhibit E.

Ans. They are included in that exhibit, but not separated from the sales and profits of the other mops.

(The statement of the sales and profits of the three-part mop offered in evidence, marked "Defendants' Exhibit F.")

Ques. State whether or not Exhibit F contains a correct statement of the amount received from the sales of the three-part mop, and of the profits realized therefrom.

Ans. It does, as near as we are able to arrive at it.

282 Ques. When did you begin to manufacture and sell the three-part mop?

Ans. September 21, 1874, was the first we sold.

Ques. Have you also caused to be prepared a list of names of individuals and firms who were customers of yours in the general hardware trade prior to March 13, 1874, and whose names appear in the list Exhibit A, to whom you afterwards sold mop-heads?

(Objected to as irrelevant and unimportant.)

(On the margin:) Objection overruled. Exception for complainant.

Ans. We prepared such a list.

(Paper is produced and put in evidence, marked "Defendants' Exhibit G.)

(Objected to on same grounds.)

Ques. State whether or not the names on this list appear on your books as customers of yours in the general hardware trade who had purchased of your firm prior to the sale by you of mop-heads.

Ans. They all appear on our books as our former customers.

(A mop-head is here shown to witness, offered in evidence, and marked "Defendants' Exhibit H.")

Ques. State whether or not this mop-head Exhibit H is substantially the same in its mode of operation as the Defendants' Exhibit D.

Ans. The principle is the same, and it is substantially the same article.

(The complainant objects to the foregoing question and answer, on the ground that the witness is not an expert.)

(On the margin:) Objection overruled. Exception for compl'nt.)

Ques. Since the service upon you of the injunction, have the defendants manufactured and sold other mops not covered by, nor claimed to be covered by, the complainant's patents?

(Objected to as last above.)

(On the margin:) Objection overruled. Exception for complainant.

283 Ans. We have manufactured and are manufacturing a mop on which we have obtained a patent, and we are not aware of any party or parties laying any claims to the article as an infringement.

(Mop-head is produced and shown to witness.)

Ques. Is this the style which you now make and sell?

Ans. It is, for a mop strictly.

(Offered in evidence, marked "Defendants' Exhibit I.")

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for complainant.

Ques. When did you begin to manufacture and sell this mop?

(Objected to as immaterial.)

(On the margin:) Same ruling and exception.

Ans. About July 1, 1875.

Ques. Have your sales since then been large in this style of mop?

(Same objection.)

(On the margin:) Same ruling and exception.

Ans. They have been very fair, and proportionately do not vary much from previous sales of the mops covered by this accounting.

Ques. Have you the patent of this?

Ans. It is in our office.

Ques. Will you produce it?

Ans. I will, but cannot do it now.

On being cross-examined by counsel for complainant the witness said:

Ques. What is the date of that patent?

Ans. July 9th, 1875.

Ques. Who was the inventor of it?

Ans. Charles B. Clark, one of the defendants.

Ques. When did he make the invention?

Ans. During the month of June, 1875.

Ques. How many of these mops have been sold in all? I refer to Exhibit I.

Ans. I couldn't say.

284 Ques. State as nearly as you can.

Ans. It was in the neighborhood of five thousand dozens to January 1st, 1876, commencing the 1st of July, 1875.

Ques. What have you sold them at?

Ans. One dollar and seventy-five cents per dozen.

Ques. What is the lowest sale you have made of them?

Ans. We have not sold any at a less price than that, except that we make a discount for cash.

Ques. Of how much?

Ans. That varies somewhat. We usually allow one per cent. a month for cash.

Ques. The ordinary sales being on what credit?

Ans. On thirty days to four months.

Ques. What is the largest discount for cash that you have made?

Ans. If the credit was sixty days it would be two per cent. If ninety days it would be three per cent., and so on, not exceeding four months' credit.

Ques. That means, I suppose, that you have never discounted for cash more than four per cent.

Ans. Not to my knowledge.

Ques. Have you not made sales to some large dealers for a less price than you have named?

Ans. Not that I am aware of. Do not think we have.

Ques. Where did you obtain the mop-head Exhibit H?

Ans. It was made at our works.

Ques. When was it made?

Ans. I could not say. Could not give the month.

Ques. About when?

Ans. During the latter part of the year 1875.

Ques. Did you make more than one?

Ans. We did not.

Ques. Is the sample Exhibit H, to your knowledge, on sale at any place at the present time, or others like it, I mean?

285 Ans. Not that I am aware of.

Ques. Where did you get the cross-head for Exhibit H?

Ans. Made it.

Ques. Yourself?

Ans. We did.

Ques. Where did you get the pattern for the cross-head and socket?

Ans. We have had it some time. Could not say where or when it was made.

Ques. Did you purchase Exhibit D in the market?

Ans. Did not.

Ques. Where did you obtain Exhibit D?

Ans. Made it.

Ques. When did you make it?

Ans. About the commencement of this suit in 1874.

Ques. For what purpose did you make it?

Ans. Made it to illustrate an old principle which was embodied in a mop that was used years ago, to illustrate the state of the art in our suit with O. S. Garretson.

Ques. How many of them did you make like Exhibit D?

Ans. We made but that one, but had as exhibit in the suit one that had been used for years, for twenty-five years possibly, known as Exhibit I in the printed case, differing a little in its construction.

Ques. On the hearing of this case was there a sample of the mop, which you have here spoken of by the name of the three-part mop, in evidence?

Ans. There was.

Ques. Do you remember whether it was designated in the hearing by the name of the three-part mop?

Ans. I believe it was.

Ques. Do you know whether it is the same mop which was made an exhibit by the complainant under the name of Exhibit No. 8 on that hearing?

286 Ans. I believe it is.

Ques. When did you sell any specimens or any samples of the three-part mop?

Ans. About the 7th of May, 1875.

Ques. You have sold none since the writ of injunction in this case was served on you?

Ans. None of that pattern.

Ques. For what reason did you discontinue selling the three-part mop?

Ans. Because we were advised by counsel to withhold the manufacture, for a while, at least—the manufacture and sale.

Ques. Did you put into your mops, while you made mops, any other than maple or beech handles?

Ans. We did; a portion were of ash.

Ques. What portion were ash?

Ans. Could not say positively; probably one-fourth.

Ques. What did the ash handles cost?

Ans. The same as maple and beech.

Ques. Whom did you buy of?

Ans. The most we purchased of Robert S. Warren, living near Buffalo somewhere.

Ques. Have you bills of your purchases of handles which you could produce?

Ans. I have.

Ques. Were any bought at less than twenty-two dollars per thousand?

Ans. I think we bought some for twenty dollars. We have paid him as high as twenty-five.

Ques. Did you buy any lower than twenty?

Ans. I think we purchased some at eighteen dollars during the year 1874.

Ques. Did you buy any at sixteen dollars?

Ans. Think we did not.

Ques. Of whom did you buy your pig-iron?

287 Ans. From various parties. We bought our Scotch pig in 1874 of E. L. Hedstrom and Company. We bought our A 1 iron of the Union Iron Company, from the Charlotte Iron Company, from the Onondaga Iron Company, and from Pratt & Company. More from the Union Iron Company than any other furnace.

Ques. Did you buy your pig-iron by the ton?

Ans. We generally purchased our A 1 iron in ten ton lots. Our Scotch pig in less quantities.

Ques. What price did you pay the Union Iron Company for a lot of ten tons of A 1?

Ans. During the fore part of 1874 we paid thirty dollars per ton and a fraction over. We afterwards purchased during the latter part of the year for thirty dollars of the Union Iron Company.

Ques. Were they gross tons?

Ans. They were, 2,240 pounds.

Adjourned to February 21, 1876, at 10½ a. m.

FEBRUARY 21, 1876—10½ a. m.

Mr. Allen appears for complainant and the defendants in person.

Adjourned by consent to February 23, 1876, at 10½ a. m.

FEBRUARY 23, 1876.

Parties and counsel present. Examination of Mr. J. K. Clark sus-

pended by consent, and the defendant, called as a witness RUFUS F. OSGOOD, who, being sworn, testified as follows:

Ques. What is your residence and business?

Ans. Residence is Rochester, N. Y.; my business is solicitor of patents.

Ques. State whether or not you have made mechanics and mechanical principles a study; and, if so, for how long.

288 Ans. I have for the past twenty years.

Exhibits D and H are shown to the witness, and he his asked:

Ques. State whether or not, in your opinion, there is any substantial difference in the mode of operation between those two exhibits.

(Objected to as immaterial and irrelevant.)

(On the margin:) Objection overruled; exception for compl't.

Ans. I see no substantial difference in their mode of operation; I think they both operate on the same general principle.

Ques. With a knowledge of Exhibit D, would it require, on the part of a person invention or an inventive 'act to construct Exhibit H?

(Same objection.)

(On the margin:) Same ruling.

Ans. I think not. I think it would simply require the skill of a good workman.

On being cross-examined by the counsel for the complainant, the witness said:

Ques. Were you a witness on the original hearing of this case for the defendants as an expert?

Ans. I was.

RUFUS F. OSGOOD.

Examination taken, reduced to writing, read over to witness, and by him subscribed and sworn before me this twenty-third day of February, 1876.

GEO. J. SICARD,
Master, &c.

Cross-examination of John K. Clark resumed:

The witness desires to correct the evidence given by him on cross-examination concerning the date of the patent under which the defendants now make mop-heads, by stating that such patent is dated August

289 3, 1875, and also by stating that the defendants had made two wrought-iron mop-heads instead of only one, as he testified, and that Exhibit D is one of those two, and the other was used on the original hearing in this case and was marked "Defendants' Exhibit F," on that hearing:

Ques. Which member of your firm took charge of the department of making the purchases of materials for mops?

Ans. In making purchases all the members were usually consulted. It was not confined to any one member to attend strictly to that part of the business.

Ques. Did any one member have more to do in making the purchases of mop materials than any one or more of the other members?

Ans. At times they may have had; if so, I mention E. L. Ferguson and myself, if there was any difference as knowing most.

Ques. Were there purchases made during the period covered by this accounting of mop materials of which you had no knowledge at the time?

Ans. There may have been.

Ques. Was that the case with reference to mop handles?

Ans. I do not think it was.

Ques. Was it the case with reference to wire, rivets, twine, or labels?

Ans. It may have been.

Ques. With reference to all of them?

Ans. Yes.

Ques. I understood you to say on your cross-examination at the last sitting that you purchased most of the mop handles of the mops accounted for in Exhibit A of Robert S. Warren, living near Buffalo somewhere. Do you state that answer now to be correct, or would you wish to modify it?

Ans. A large portion of them were purchased of Robert S. Warren, but what proportion I would not be willing to say.

290 Ques. How large a portion would you be willing to say were bought of Warren?

Ans. I could not make any estimate without referring to our books or our account with him.

Ques. Do you think most of them were purchased of him?

Ans. Could not say. We purchased also of the Westfield Manufacturing Company and the Rockford Clothes Pin Company during that period, what proportion from each I cannot tell.

Ques. Did you intend to be understood in your answer to a previous question by me that $18 a thousand was the lowest price paid by the defendants for mop handles during that period of this accounting.

Ans. I did; do not think we bought at any less price during that period.

Ques. Were any of the mops sold during that period made with handles that were purchased at a less price than that?

Ans. Do not think there was.

A. Are you willing to testify positively that during this period of the accounting your firm did not purchase mop-handles at $14 per thousand?

Ans. I am. We did not.

Ques. Do you make that answer positive?

Ans. I have no knowledge of any such price. Do not think we ever purchased any at that price?

Ques. I repeat the question—are you positive or not?

Ans. I am positive that to my knowledge we never purchased mop handles at that price—at so low a price.

Ques. Are you positive that if your firm had done so you would have known it?

Ans. I haven't the least doubt but what I should have known it.

291 Ques. Are you able to produce here all the bills of purchases of mop handles for the mops embraced in this accounting?

Ans. We can so produce.

Ques. Can you do the same with reference to the wire?

Ans. We can most of them, and perhaps all.

Ques. How is it in regard to rivets, twine, and labels?

Ans. The same.

Ques. How is it with reference to iron?

Ans. The same.

Ques. Have you now here all the bills of purchases of mop handles?

Ans. I have not. I have a portion of Robert S. Warren's bills.

Ques. What do those bills show to be the total number of handles purchased of Warren?

Ans. Thirty-four thousand five hundred and sixty-seven.

Ques. What number of mop handles would be consumed in making the twelve thousand seven hundred and seven and one-half dozen embraced in the account?

Ans. About one hundred and fifty-two thousand four hundred and eighty-four handles.

Ques. What share then of the whole number of mop handles consumed by your firm do you find then to have been bought of Warren?

Ans. According to the bills that I have here of Warren's about one-fourth; a trifle more than one-fourth.

Ques. Is it not less than one-fifth of the whole?

Ans. I do not make it so.

Ques. Have you other bills with you than of purchases of Warren?

Ans. I have not, but will produce them if wished.

Ques. Were Warren's purchases the highest you made?

292 Ans. They were; in price I suppose you mean.

Ques. What bills have you here now of iron wire?

Ans. Washburn & Moen Manufacturing Company, George W. Prentiss & Co.—two bills only.

Ques. What is the total amount of purchases covered by the two bills?

Ans. Two thousand one hundred and thirty-six (2,136) pounds of wire, billed as mop wire.

Ques. What proportion of the mop wire used in making the 12,700 dozens covered by this accounting does the amount in these two bills cover?

Ans. But a small portion.

Ques. These bills show prices at six and six and a quarter cents. If they are a fair sample of the prices you paid for mop wire why does your estimate set it down at eight cents a pound?

Ans. In the estimate we allowed for freight and the waste in manufacturing.

Ques. Does not the bill handed you make deduction for freight?

Ans. It does, five cents per hundred pounds, a partial allowance of the whole.

Ques. What would the full freight per hundred be?

Ans. Cannot say without referring to our freight bills.

Ques. You said that your firm as now organized dates from 1869; what amount of capital was it organized with at that date?

(Objected to as immaterial. The capital invested during the period covered by the accounting is all that can be inquired into.)

Ans. I do not remember.

Ques. Give me your best recollection about it.

Ans. I have no distinct recollection.

Ques. Do you mean to say that you can give me no idea?

293 Ans. I could not an intelligent idea without looking the matter up.

Ques. Can you tell me what the capital was in at that time?

Ans. Stock and goods manufactured, accounts, machinery, and money.

Ques. Was there any land or buildings?

Ans. I might say in answer to that, immediately after the formation of the company there was a building erected and owned by the company as our foundry.

Ques. Upon whose land was it put?

Ans. Land that the firm purchased at that time.

Ques. When was the building or the buildings completed?

Ans. In the fall of 1869.

Ques. What was the purchase-price of the land?

Ans. The price paid was $75 per foot front; do not remember the number of feet purchased.

Ques. Was your foundry subsequently removed?

Ans. We subsequently purchased other ground and erected a foundry and other buildings.

Ques. At what date was that done?

Ans. I think it was the year 1873.

Ques. When that was done, was the first foundry disposed of or sold?

Ans. It was.

Ques. What time in the year 1873 was the new foundry completed?

Ans. If it was 1873, the buildings were commenced in the fall and completed in the following spring, 1874.

Ques. Let me refresh your memory. Was not the building commenced in the fall of 1872 and completed in the spring of 1873?

Ans. It may have been so.

Ques. Do you remember it so now?

294 Ans. I do not; could not say without referring to the matter.

Ques. That is the location, is it not, where your foundry is now situated and carried on?

Ans. It is.

Ques. What was the cost of the land?

Ans. Could not say positively without referring to the books.

Ques. About what was it?

Ans. Think it was about $90 per foot on Niagara street, running through to seventh.

Ques. About how many feet on Niagara?

Ans. About one hundred and thirty-five feet.

Ques. What was the cost of the buildings erected, about?

Ans. Could not say without looking; about twenty thousand dollars—in that neighborhood.

Ques. After that building was completed and furnished with machinery, what were the first articles your firm manufactured there?

(Objected to as immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Ans. Blind-hinges of several styles and sizes, gate-hinges, window-sash locks of several kinds, sash bolts, various kinds and sizes of window-sash pulleys.

Ques. How long was it after the buildings were completed and the foundry and shop put in operation before your firm commenced the manufacture of mops?

Ans. Could not say how long it was. We began the manufacture of mops about the 1st of March, 1874.

Ques. What is your recollection as to the length of the interval, if you have any recollection of it?

Ans. If the buildings were completed in the spring of 1873, it would be about one year.

Ques. What was the aggregate cost of the machinery and tools with which the buildings were furnished, as nearly as you can state?

295 Ans. I should say about thirty thousand dollars, as nearly as I can state now. That does not include the land.

Ques. Do you include the buildings in that?

Ans. I meant to include the buildings.

Ques. Have you any recollection now whether those buildings were completed and furnished before or after your firm commenced to manufacture mops?

Ans. They were in the main completed before. We have made some additions since to the buildings and machinery.

Ques. Have you any recollection whether, previous to your commencing to manufacture mops, other business had been carried on to any amount, or for any period of time, in those buildings by you?

Ans. If the buildings were completed in the spring of 1873, there was other business carried on before the commencement to manufacture mops.

Ques. Have you no recollection by which you can answer directly without an "if?"

Ans. My opinion is that we carried on other business previous to the manufacture of mops in that place.

Ques. For how long?

Ans. For one year, if we occupied the buildings in the spring of 1873. I don't wish to swear positively on that point till I have looked it up.

Ques. Previous to your commencing the manufacture of mops, how many men were employed in the establishment?

Ans. Could not say positively; should think between forty and fifty.

Ques. When you commenced to manufacture mops were any added with reference to mop making?

Ans. There was.

Ques. How many?

Ans. Should say six or eight.

296 Ques. Were those persons partly engaged in other work, or were they wholly engaged in work upon mops?

Ans. The extra number we put to work were engaged in making mops exclusively.

Ques. State how the work was distributed, how many men to each kind.

Ans. Could not state that definitely in its details.

Ques. State it as near as you can.

Ans. There were two at moulding most of the time, two at riveting, one coppering and staining, one putting on handles, one bending wire and nicking, cutting, straightening, and bending wire, with some assistance by a boy.

Ques. How many of these were men and how many were boys?

Ans. Usually employed about two boys about that business.

Ques. What wages were paid to the boys?

Ans. About three dollars per week, without board.

Ques. What wages were paid to the moulders?

Ans. They worked by the pound. The average price paid was about two cents a pound.

Ques. Name the men.

Ans. George Wolford was the name of one man. I don't know his place of residence; in Buffalo, however. Bronson was the name of one who worked moulding at times on the mop. Another man named Hanneman worked sometimes on the mop. I think Bronson lives at Black Rock. Do not know positively.

Ques. Did you pay these men by the pound or by the mould?

Ans. By the pound.

Ques. What price did you pay for moulding cross-heads?

Ans. Could not say positively; about a cent and two-thirds per pound.

297 Ques. What price did you pay for moulding collars and nuts?

Ans. Could not say without looking, but in the neighborhood of two cents per pound.

Ques. What wages did you pay to the men employed in riveting?

Ans. A dollar twenty-five cents a day.

Ques. What wages did you pay to the man employed in coppering and staining?

Ans. One dollar seventy-five cents per day.

Ques. What did you pay the man for putting on handles?

Ans. A dollar and a quarter per day.

Ques. What did you pay the man for bending, cutting, and straightening the wire per day?

Ans. One dollar twenty-five cents.

Ques. Can you give the names of these men?

Ans. I can; Charles Eberhart, Fred Eberhart, John Sturtzman, L. Brady. Don't remember the other boy that riveted; his name is Whiting; don't remember his first name. There were two Whitings.

Ques. Which of these men did the coppering?

Ans. Charles Eberhart.

Ques. Which the bending of the wire?

Ans. That work was divided usually between Fred Eberhart and L. Brady.

Ques. Are these men, or any of them, now in your employ?

Ans. All are, except the two Whitings.

Ques. What are they at work on?

Ans. Manufacturing mops.

Ques. Exclusively?

Ans. They are, mops and mop and brush holders.

298 Ques. Do you mean to say that during the period covered by this accounting your firm employed continuously six men and two boys in working exclusively upon the manufacture of mops. Am I to understand that?

Ans. They were not employed continuously. In the winter months they were not employed all the time.

Ques. What deduction of time should be made, as nearly as you can tell, out of this period of the accounting?

Ans. Do not know, but should think about two months.

Ques. Were the two Whitings employed wholly on mops, or only one of them?

Ans. I think the average would be about one of the two all the time that the manufacturing was going on.

Ques. Have you your bills of mop materials purchased by your firm during the period of this accounting now in court?

Ans. We have.

Ques. Give the amounts and prices of the several purchases of mop handles from your books.

Ans. Of Robert S. Warren we bought:

March	31,	1874,	2,000	handles,	$25	per	thousand.
April	8,	"	2,067	"	25	"	
"	25,	"	3,500	"	25	"	
May	6,	"	3,000	"	25	"	
"	23,	"	3,500	"	25	"	
June	5,	"	4,000	"	25	"	
"	11,	"	4,000	"	25	"	
August	1,	"	4,000	"	20	"	
"	13,	"	4,000	"	20	"	
"	15,	"	4,500	"	20	"	

Of the Westfield Manufacturing Co.:

	May	25,	1874,	11,625	handles,	$20	per thousand.
	"	25,	"	2,250	"	18	"
	June	1,	"	4,875	"	18	"
	"	10,	"	3,375	"	18	"
299	June	23,	1874,	6,100	handles,	$18	per thousand.
	July	11,	"	6,950	"	18	"
	"	22,	"	675	"	18	"

Of the Rockford Clothes Pin Company, of Kalamazoo, Mich., as follows:

July	9,	1874,	18,350	handles,	$18	per	thousand.
August	31,	"	25,000	"	18	"	
Oct.	31,	"	25,000	"	18	"	

That is all in 1874, I think.

March 16, 1875, 20,000 handles, $18 per thousand.

That is all.

Ques. During that period did your firm buy any of Wyman & Parsons, of Corry, Pa.?

Ans. I have no recollection of any such purchase. There was none in 1874. I find here an invoice in 1875, May 3, of 10,000, at $14 per thousand.

(Objected to as not coming within the period.)

(On the margin:) Objection overruled. Exception for def'ts.

Ques. Do you think that you have now reported as many mop-handles as there would be in the whole number of mops specified in the account?

Ans. I think I have reported all that we purchased during that time, as the bills would show.

Ques. Have you here now all your bills of purchase of mop wire during the same period?

Ans. Think we have.

Ques. Give dates, amounts, and prices of the several purchases.

Ans. We purchased of Sidney Shepard & Co., of Buffalo, as follows: March 16, 1874, 3 bundles No. 7 wire, $18.90; discount, $6.61; net, $12.29.

There was 63 pounds to the bundle.

There should be an invoice previous to this, but I do not find it.

300 April 2, 1874. 8 bundles No. 7 list, $50.40, dis. $17.64, net $32.76
April 22, " 2 " " 12.60 " 4.41 " 8.19
April 29, " 4 " " 25.20 " 8.82 " 16.38
May 11, " 2 " " 12.60 " 4.41 " 8.19
June 5, " 4 " " 25.20 " 9.45 " 15.75
Aug. 3, " 2 " " 12.60 " 4.71 " 7.89

Of George W. Prentiss & Co., Holyoke, Mass.:

May 11, 1874. 1,119 lbs. wire, at 6¼ cents..... $69 93
April 27, 1874. 198 " 6½ " 12 87

Of Washburn & Moen Manufacturing Co., Worcester, Mass.:

April 30, 1874. 3 bdls. No. 1 ex. mop wire, 7c. per pound..... $13 26
May 29, " 1,028 pounds mop wire, at 6c. " 61 68
June 3, " 471 " " 6c. " 28 26
July 1, " 1,017 " " 6c. " 61 02
July 23, " 975 " " 6c. " 58 50
Aug. 12, " 1,017 " " 6½c. " 66 11
Sept. 21, " 1,029 " " 6½c. " 66 89
Oct. 13, " 988 " " 6½c. " 64 22
Nov. 19, " 961 " " 6½c. " 62 47
March 15, 1875. 973 " " 6½c. " 63 25
April 22, " 1,005 " " 6½c. " 65 33

That's all, I believe.

Ques. State what your bills of purchase of twine show—quantity and price.

Ans. The purchase was of Harris Bro. & Co., New York City, March 4, 1874, 45 packages No. 124 twine, 26c. per pound, $11.70. That is all we purchased in quantity and have bills for.

Ques. State what your bills show your average price per thousand for labels.

Ans. The bills show part 80 cents and a part $1.00 per thousand.

Ques. What do your bills show the price you paid per pound for rivets?

Ans. Sixteen cents per pound.

Ques. What do your bills show you paid per pound for mop nails?

Ans. Twenty cents.

301 Ques. What price do your bills show your purchases of the greater part of your A 1 pig-iron to be at?

Ans. Thirty dollars per ton.

Ques. What proportion of other iron did you use in making mops besides the A 1 pig?

Ans. About one-third Scotch iron.

Ques. What do your bills show the price per ton of Scotch iron?

Ans. Thirty-eight dollars per ton.

Ques. Did you bring with you your book showing the time and wages of the men engaged in mop making?

Ans. I did.

Ques. Does that book show the names of any other persons in your employ during the period covered by this accounting other than those given by you in answer to my previous question?

Ans. It shows about all of those in our employ throughout the works.

Ques. Name the names whom this book shows during the period covered by this accounting and being engaged in the branch of mop making.

Ans. It would not be strictly correct, as they were at times otherwise employed, some of them in the general manufacturing. I will name those who were strictly and exclusively employed in the mop business—Fred. Eberhart. I can recall to mind the fact that Charles Eberhart was at times employed in other manufacturing, though he was employed on mops the greater part of the time; I should say three-fourths of the time. So with L. Brady; so W. Whiting, H. Whiting, John Sturtzman, M. Shorter, I should say, were on the mop business three-fourths of the time. I would not be certain, but think this covers all the names employed on the mops outside of the foundry.

Ques. Do these names you have given include the moulders?

302 Ans. They do not.

Ques. Does this book contain a correct statement of the wages of the men you have just named, from week to week, during the period covered by this accounting?

Ans. Think it does, though would not be certain about it. There may be some discrepancies that I do not see now.

Ques. Is it a book kept expressly to show the wages of the men from week to week?

Ans. It shows what is paid the men from week to week, and yet it might not show where money was advanced between the pay days to the several hands.

Ques. Is not the object of this book to show opposite the name of each man in your employ the amount of his earnings for the preceding week?

Ans. It is, unless there has been an advance paid him previous to the pay-day.

Ques. Suppose there had been, would not the figures carried out opposite the name be the sum the man had earned that week?

Ans. We keep no accounts with our hands, and if there had been an advance of one or more dollars between the pay-days it would be taken out, and the balance due would appear on this book.

Ques. If you remember any instance of any advance being made to either of the men named by you, state the occasion and name of the man and amount of the advance.

Ans. I do not now remember any particular instance of that kind. It is very common for the hands to ask for one or more dollars between pay-days, and we generally accommodate them.

Ques. Was the matter of paying men and taking charge of their accounts under your particular charge?

Ans. It was not.

Ques. Under whose was it?

303 Ans. Not either of the firm, strictly speaking, made that his business. Sometimes one would foot up the amount due the hands on the pay-days, and sometimes another.

(Book produced by the witness offered in evidence and marked "Complainant's Exhibit 9.")

Ques. You said in your answer to Mr. Macomber's question that the copy of the complainant's patent which you saw before this suit commenced was not shown to you by Mr. Garretson. How did you obtain or see such copy?

Ans. I could not say now where I first saw it, but I think it was shown me by C. B. Clark, who had a copy of the letters patent.

Ques. How long previous to the commencement of this suit was it shown to you?

Ans. That I don't recollect. It was some time during the spring of 1874.

Ques. Don't you think you saw it in the winter of 1873–'4?

Ans. I may have seen it during that time, but think not.

Ques. Which patent do you refer to?

Ans. I refer to both patents—the patent of Clark and Garretson and of O. S. Garretson.

Ques. When did you first know of the patent to Clark and Garretson?

Ans. I could not give the date, but I had heard before the spring of 1874 that there was such a patent granted to C. B. Clark and O. S. Garretson.

Ques. When did you first hear of the Garretson patent which bears date in 1867.

Ans. I could not say when, but some time previous to 1874.

Ques. Did you mean to be understood in your answer that you

304 gave the other day that your firm had or had had any right to manufacture the Clark and Ferguson patent.

Ans. My impression was that we had such a right, but I could not say positively without investigating the matter.

Ques. Don't you know that Mr. English was the exclusive owner of the right to manufacture under that patent?

Ans. I had heard that Mr. English purchased an interest in some manner to manufacture a mop patented by C. B. Clark and E. L. Ferguson. I supposed that to be a limited interest and that it again reverted back to C. B. Clark and E. L. Ferguson.

Ques. You are not aware, then, that it is an exclusive interest and that English still holds it?

Ans. I am not. I think there were two different patents granted to C. B. Clark and E. L. Ferguson for a mop-head—the difference being in the collar; at least that was my understanding. Which one of those Mr. English purchased his interest in I could not say.

Ques. When your brother showed you the copy of complainant's patents, as you have stated, did he also show them to your partners or any of them?

Ans. I do not recollect.

On being re-examined by counsel for defendants he said:

Ques. Were any of the 10,000 mop handles which were billed to you

by Wyman & Parsons May 3d, 1875, used by the defendants in any mops sold prior to May 7th, 1875?

Ans. They were not.

Ques. Can you state whether they were received by you before that time?

Ans. Do not think they were, from the fact of their being shipped on the 3d. It would be about one week before we received them—might be longer.

305 Ques. State whether or not you paid freight on mop handles in addition to the price named in the bills that have been produced.

Ans. Don't think we did, although there may have been exceptions to the matter.

Ques. Did you pay any freight on wire?

Ans. We did.

Ques. State whether or not your firm manufacture and sell a combined mop and brush-holder; and, if so, when did you begin to sell them? State generally in what quantities.

Ans. We do manufacture a mop and brush-holder. Commenced manufacturing the article about the 1st of September, 1875. They were generally sold by the case, containing 12 dozen, in quantities from one to five cases. The whole amount sold from September 1st, 1875, to January 1st, 1876, was about 2,900 dozen.

Ques. Produce a specimen of your combined mop and brush-holder.

(Produced and offered in evidence, marked "Defendants' Exhibit J.")

(Objected to by counsel for complainant as irrelevant, redundant, and immaterial.)

(On the margin:) Objection overruled. Exception for compl't.)

The Defendants' Exhibit I is shown witness and he is asked:

Ques. State the relative cost of making that mop, including the cost of material, as compared with the cost of making and of material of the mops made by you covered by this accounting.

(Objected to on the ground that it is a patented mop not in existence during the period covered by this accounting, and that it is irrelevant, immaterial, and not proper redirect examination.)

(On the margin:) Objection overruled. Exception for compl't.)

306 Ans. We estimate the cost to be about ten per cent. less.

Defendants offer in evidence the letters patent granted to Charles B. Clark August 3d, 1875, under which Exhibit I is made.

(Objected to by complainant's counsel as irrelevant and immaterial.)

(On the margin:) Objection overruled. Exception for def'ts.

Letters patent marked "Defendants' Exhibit K."

Ques. Did you hear Mr. Garretson's evidence relative to leaving out certain matters in difference between you and him to Mr. Fraser?

Ans. I did.

Ques. State whether or not Garretson proposed to you in substance that you should go before Mr. Fraser and each state his case to him, and abide the result of his decision in regard to Garretson's charge that you were infringing his patents.

(Objected to as leading.)

(On the margin:) Objection sustained. Exception for def't.

Ans. I never heard any such proposal.

Ques. Did you ever hear that any such proposal had been made to either of your partners?

Ans. I never did.

JOHN K. CLARK.

Examination taken, reduced to writing, read over to witness, and by him subscribed and sworn before me this 23d day of February, 1876.

GEO. J. SICARD,
Master, &c.

EDWIN L. FERGUSON sworn for defendants.

Ques. You are one of the defendants?

Ans. I am.

307 Ques. Do you remember the occasion of Mr. Garretson's coming to your place of business in the fall of 1875? And, if so, state the time as nearly as you can and who was present.

Ans. He was there about the first of November, 1875; couldn't tell the exact date. He was there two or three different times about that date, within a week or two. Mr. John Clark was present, and I think our clerk, Mr. Wm. Clark, was in the office most of the time. I think Henry Clark was in or out, but cannot remember whether he was there or not.

Ques. Was there a conversation had at that time with Garretson? And, if so, state with whom it was had.

Ans. The conversation was mainly with Mr. John Clark.

Ques. Did you hear it?

Ans. A good deal of it. I did not hear until towards the close of the interview. I did not hear much of what was said.

Ques. State what, if anything, you heard Mr. Garretson say then in regard to his efforts to effect sales of his mops while you were manufacturing them.

Ans. He said he had made no special effort to sell them; he considered ours an infringement, and in substance that he expected to make it out of us. I couldn't say the precise words that he used.

Ques. State whether or not Mr. Garretson, in the year 1873 or 1874, proposed to you or to any members of your firm, to your knowledge, to lay the matter of the alleged infringement before Mr. Fraser, and to submit to his decision thereon.

Ans. Not to my knowledge. He did not to me, nor to members of my firm, so far as I know.

On being cross-examined, he said:

Ques. What was then said there about Mr. Fraser or about going before Mr. Fraser?

Ans. Nothing to my knowledge.

308 Ques. Did Mr. Fraser say anything to you or to any of your firm, to your knowledge, about the matter in difference with Mr. Garretson?

Ans. The matter of the alleged infringement was referred to him by us; but as to referring the matter to him to act as arbitrator, I know nothing of it.

Ques. In that talk with Mr. Garretson at your shop in fall of 1875, did Mr. Garretson say he couldn't meet your prices on mops?

Ans. He said his price he kept up and made no special effort to sell.

Ques. Did he say that your price was put so low that he had not been able to compete with you when holding his mops at two dollars?

Ans. I am not able to give the conversation. The conversation was mainly with Mr. John Clark. I was at my desk, some little distance, while they were talking about mops, and did not hear much till I came over to the stove where they were talking, and heard him make the remark that he had not made any special effort to push them in the market to sell them.

Ques. Did he not say that the reason of that was that your prices were put so low?

Ans. He did not in my hearing.

E. L. FERGUSON.

Examination taken, reduced to writing, read over to the witness, and by him subscribed before me this 23d day of February, 1876.

GEO. J. SICARD,
Master, &c.

HENRY R. CLARK sworn for defendants.

Ques. Are you one of the defendants?

Ans. I am.

Ques. Did you hear any part of the conversation between John
309 Clark and Mr. Garretson last fall, spoken of by last witness? And, if so, state what part of it you heard.

Ans. I was present a portion of the time; did not hear all the conversation.

Ques. State what you did hear Garretson say.

Ans. I remember hearing him say he made no effort to sell his mops while we were in the market; that he considered it an infringement of his mop and that we were good for the damages—that it was the Garretson mop under another name.

Ques. State whether or not Mr. Garretson called at your place of business in the fall of 1873 and exhibited to you his letters patent, or warned you against infringing them.

Ans. I have no recollection of his calling at that time. Am very positive I never saw him show his patent papers.

Ques. Do you recollect of his calling in the spring of 1874, after you had got under way manufacturing?

Ans. Seems to me he came up there after we got to making mops, but can't say positively; think he did.

Ques. Did he at that time show you his letters patent?

Ans. No; not to my recollection.

Ques. State whether or not Mr. Garretson, before the commencement of this action, proposed to you or either of your partners, to your knowledge, to submit the matter of the alleged infringement to Mr. Fraser, and to abide his decision.

Ans. He did not say anything to me, and I have no recollection of his mentioning it to any of the rest, to my knowledge.

Ques. The other defendant, Charles B. Clark, is at the South for his health?

Ans. He is.

On being cross-examined, he said:

310 Ques. Did your brother, Charles B. Clark, have the main charge of the matters of the firm which related to patents?

Ans. He did the most of the patent business; yes, sir.

Ques. He was an inventor?

Ans. He considered himself such.

Ques. Were any of the other members an inventor, to your knowledge?

Ans. He did the main portion of it; others may have made some suggestions.

Ques. How many times did Mr. Garretson come to your place of business before this suit was brought in order not to have your firm make what he claimed were his mops.

Ans. I don't know that he was there at all; he may have been.

Ques. Don't you remember, when you were still at the Beehive, Mr. Garretson handing his patent to you and your taking it?

Ans. I have no such recollection.

Ques. When did you first see a copy of his patents?

Ans. I think the first copy I saw was a duplicate, as you might say, from Washington.

Ques. When?

Ans. I think it was about the time of the commencement of the suit that Clark sent to Washington, and it was about that time I saw it.

Ques. How long before the suit was brought?

Ans. Think it was after the suit was brought that he sent for it.

Ques. Don't you know it was months before?

Ans. I do not.

Ques. How did you first know about Garretson claiming patents on mops?

311 Ans. I think when I first came to Buffalo I heard he had taken out patents on mops; it was in 1867; couldn't say if he was making them then or not.

Ques. Do you swear that he did not say to you before this suit was brought that the mops you were going to make or were making were an infringement on his patent?

Ans. I have no recollection of his saying anything like that.

Ques. Do you swear that he did not?

Ans. I swear that I have no recollection of it.

Ques. In this other conversation you mention with him in the fall of 1875, did he say he had made no special effort to sell his mops?

Ans. I remember he said his price was $2 per dozen; can't say whether he mentioned the word "special" or not; that that was his price, and if they didn't want them at that they might let them alone.

Ques. Did he say he could not meet your prices?

Ans. He said that he would not meet our prices.

HENRY R. CLARK.

Examination taken, reduced to writing, read over to witness, and by him subscribed and sworn before me this 23d day of February, 1876.

GEO. J. SICARD,
Master, &c.

Adjourned to March 3, 1876, at 10½ a. m.

MARCH 3D, 1876—10½ a. m.

Parties appeared. Adjourned by consent to March 29, 1876, at 10 a. m.

MARCH 29TH, 1876.

Parties appeared. Adjourned by consent to April 6, 1876.

312 APRIL 6, 1876.

Mr. Allen for complainant; Mr. Macomber for respondents; and the parties respectively.

Mr. Allen sums up.

Adjourned to April 7, 9 a. m.

APRIL 7, 1876.

Mr. Allen and Mr. Macomber and the parties present.

Mr. Macomber sums up, and the case is finally submitted by Mr. Allen.

APRIL 29, 1876.

Mr. Allen, for the complainant, offers in evidence the copy of extension of the Taylor patent.

(Mr. Macomber objects, on the ground that the proofs have been closed and the case submitted to the master.)

(On the margin:) Objection sustained and evidence excluded. Exception for complainant.

Said copy of extension is marked "Complainant's Exhibit No. 10."

(Endorsed:) Filed May 17, 1876.

EXHIBITS.

COMPLAINANT'S EXHIBIT NO. 1.—GEO. J. SICARD, *master, &c.*

	Dozen.		Dozen.
E. A. Bonesteel	36	Hibbard & Spencer	204
McNeal & Higgins	36	Wm. Blair & Co	204
Hamilton & Mathews	108	Allen, Keith & Co	36
Davis & Hunt	12	Imbush Bros	96
Cannon & Robinson	24	Dickson, Clark & Co	12
Halle, Skalle & Co	60	John Nazro & Co	144
F. A. Stowell & Co	168	L. Poppenheimer & Co	24
Pratt & Co	26	Secor, Berdan & Co	240
Wm. Bingham & Co	120	Roscoe, Miller & Co	24
Whittaker, P. & Co	60	Lyman, Cary & Co	36
Brown, Routh & Co	60	Simmons Hardware Co	72
E. Hunt & Sons	24	Markley, Allen & Co	168
313 Clark, Quinn & Chalmers	36	R. Haney & Co	12
		Willard, Bacon & Co	60
Brintnall, Terry & Belden	96	Durand, Robinson & Co	84
Wm. M. Wyeth & Co	120	Turner, Frazer & Co	60
Standart Bros	48	Nare, McCord & Co	48
Beatty & Fitzsimons	42	McComb, Keller & Byrons	12

	Dozen.
Poe & Breed	180
Fisher & Childs	132
S. H. Thompson & Co	60
Farrington & Small	36
Miller Bros. & Keep	84
C. Shepard & Co	24
C. M. Garrison & Co	12
Hinchman & Sons	24
Newell & Harrison	72
Anthony Keller	72
Nelson & Co	60
W. H. Miller & Co	12
A. D. Hopping & Wilson	1,344
Cody & Olney	36
Jno. Crouse & Co	24
McEwen & Co	12
Smith & Lapham	72
Fahnestock & Murray	12
Hamilton & Co	24
P. Becker & Co	84
McCarthy & Redfield	36
Pollock, Weaver & Co	72
Smith, Perkins & Co	48
Jno. Pritzlaff	24
Comstocke Bros	72
Edwards, Townsend & Co	36
Isham & Co	24
J. M. Warren	24
Merriam Bros	12
Carter & Ford	60
Sherman D. Phelps & Co	48
Marks & Bean	24
Smith, Cohn & Co	48
Durand & Co	36
Geo. C. Wetherbee & Co	324
L. Gould & Co	300
W. & R. Miller	12
J. V. Mehling	12
C. Berger & Braky	48
314 John Stephenson & Co	120
J. H. Cordes	60
Wm. Frankfort	12
McDonald & Hord	12
Condit, Smith & Co	12
Biederbecker & Miller	48
Lockwood, Van Dorn & Miller	108
Ducharme, Fletcher & Co	36
Schmieding, D. O. & Co	120

	Dozen.
Mather Brothers	96
Julius W. Meyer	24
Atwell & Andrews	12
Thomas Poehler	12
Sickles & Preston	60
L. H. Randall	12
S. Cupples & Co	300
E. C. & W. Gilchrist	12
Smith & Udell	60
Wm. M. Hoyt	120
Kellogg, Baker & Co	24
Krause & Dahlman	36
V. T. Hill	12
L. F. Burgess	24
G. R. Forester & Co	12
H. A. Brewster	48
Thos. B. French	12
Holton & Sons	24
Geo. Worthington & Co	24
Walsh, Coulter & Flagler	12
Jno. Gray & Co	12
Bostwick, Brown & Co	48
S. B. Wood	12
Etheridge, Fuller & Co	48
Harmon, Messer & Co	24
F. D. Cossitt & Co	24
S. W. Stearns & Son	60
Hussell Bros	24
Ball & Goodrich	108
Smith, Roundy & Co	48
Sprague, Warner & Co	120
Packard & Co	12
F. Geele	12
Ricker, Crombie & Co	36
Stewart, A. & Co	24
Dunham & Johnson	30
W. J. Quam	48
Thomas A. Parker	12
Steele & Johnson	24
Cochrane, B. & T	24
W. L. Gunn	12
Saunders & Co	12
Geo. Ross & Co	24
Reed, Murdock & Fisher	96
J. L. & W. G. Mead	60
McIntosh, Good & Co	12
Durand Bros. & Co	24
Perrin, Gaff & Co	24
J. Dahlman & Co	36
Goodrich, Terry & Co	24

	Dozen.		Dozen.
Miller, Greiner & Co.	24	Anderson, B. & Co.	12
W. P. Southworth	60	E. A. Eversman	12
Johnson & Brivillier	24	Foster, Stevens & Co.	12
Shearer & Parsons	24	Jno. Canfield	12
Heustis & Hamilton	12	S. Bliss & Co.	24
Terrill & Dunning	12	Udell, Schmeiding & Co.	60
315 Byrnes & Fitzsimons	12	Wagner & Forney	24
Barker, Dounce, Rose & Co.	12	D. H. Wilson & Co.	132
Bacon, Goodrich & Co.	24	N. Grimes & Co.	12
Henry Dart Sons	24	Total doz. sold	9,338
R. F. Bower	12	Total, 153 mop customers.	
W. J. Gould	12		

Recapitulation of sales of mops by Clark & Co., from March 13, 1874, to May 7, 1875.

Number of dozen sold to O. S. Garretson's customers	9,338
Number of dozen sold in small lots to small dealers, who usually bought of wholesale dealers, and customers of O. S. Garretson	2,457½
Number of dozen sold to wholesale dealers who had not previously bought of O. S. Garretson	904
Total dozens	12,699½

Clark & Co. sold to 153 of O. S. Garretson's customers.

(Endorsed:) Filed May 17, 1876.

COMPLAINANT'S EXHIBIT No. 2.—GEORGE J. SICARD, *master, &c.*

Amount of sales of hardware, etc., from March 13, 1874, to May 7, 1875	$38,007 53	
Amount of sales of mops from March 13, 1874, to May 7, 1875	7,536 70	
		$45,544 23

316 GENERAL EXPENSES.

Labor in the tumbling room	$381 83	
Labor of engineer	340 54	
Labor of book-keeper	948	
Cost of fuel for boiler and stoves	663 34	
Rent of shops	532 53	
Allowance for sundries	300	
		$3,166 24
General expenses on hardware, etc	$2,642 29	
" " on mops	523 95	
		$3,166 24
General expenses on $7,536.70 sales mops	$523 95	
Interest on $2,000, am't capital used mfg. mops, @ 7 p. ct	161 00	

Wear and tear of mop machinery	50 00	
Total general expense on 3,842 doz. mops		$734 95
Total gen. expense per doz	$ 19 $\frac{1293}{10000}$	
" " " " gross	2 29 $\frac{5516}{10000}$	

EXPENSE OF MANUFACTURING AND SELLING GARRETSON'S MOPS.

MATERIAL PER GROSS.

144 handles, *@* $16.00 M	$2 30 $\frac{4}{10}$	
73 lbs. iron (melted), 1¾c	1 27 $\frac{75}{100}$	
1½ " rivets, 16c	18	
11 " wire, 6c	66	
$\frac{3}{16}$ " nails, 16c	03	
$\frac{5}{16}$ " mop twine, 19c	06	
Copper and stain	04	
144 labels, 35c. M	05 $\frac{04}{100}$	
1 case	60	
		$5 20 $\frac{19}{100}$

317 LABOR.

Moulding cross-heads and making cores	$ 99	
Moulding collars	15	
" nuts	09	
Putting up and boxing	1 25	
		$2 48
Average freight paid	$ 67	
" commission	36 $\frac{25}{100}$	
" general expense	2 29 $\frac{5516}{10000}$	
		3 32 $\frac{04}{100}$
Total cost per gross		$11 00 $\frac{99}{100}$
" " " dozen	$ 91 $\frac{74}{100}$	
Allowance for cartage, postage, and stationery, per doz	02 $\frac{5}{10}$	
Allowance for cartage, postage, and stationery, per gross		30
Total cost per dozen and per gross	$ 94 $\frac{24}{100}$	$11 30 $\frac{}{100}$

(Endorsed:) Filed May 17, 1876.

COMPLAINANT'S EXHIBIT NO. 3.—GEO. J. SICARD, *master, &c.*

Sales of hardware by O. S. Garretson	$38,007 53	
Sales of mops by O. S. Garretson	7,536 70	
Sales of mops by Clark & Co	23,211 87	
		$68,756 10

GENERAL EXPENSES.

Labor in tumbling room		$381 83	
Labor of engineer		340 54	
Labor of book-keeper		948 00	
Cost of fuel for boiler and stoves		713 34	
Rent of shops		532 53	
Allowance for sundries		350 00	
			$3,266 24
318 Am't gen'l expense on $38,007.53 sales of hardware, &c		1,805 54	
Am't gen'l expense on $30,748.57 sales mops		1,460 70	
			$3,266 24
No. doz. mops sold by O. S. Garretson	3,842		
No. doz. mops sold by Clark & Co.	12,699½		
Gen'l expense on mops sold, doz.	16,541½	1,460 70	
Interest on $2,500.00 capital used in m'f'g mops, at 7 per cent		201 25	
Wear and tear of mop machinery		75 00	
Total gen'l expense on 16,541½ doz. mops			1,736 95
Average gen. expense per doz		$10\frac{5005}{10000}$	
Average gen. expense per gross		1 $26\frac{006}{1000}$	
Average freight paid per gross		67	

EXPENSE OF MANUFACTURING AND SELLING GARRETSON'S MOPS.

MATERIAL.

144 handles, $16.00 M.	$2 30	
73 lbs. iron (melted), $1\frac{3}{4}$c	1 $27\frac{75}{100}$	
$1\frac{1}{8}$ lbs. rivets, 16c	18	
11 lbs. wire, 6c	66	
$\frac{3}{16}$ lb. nails, 16c	03	
$\frac{5}{16}$ lb. mop twine, 19c	06	
Copper and stain	04	
144 mop-labels, 35c. M	$05\frac{4}{100}$	
1 case	60	
		$5 $20\frac{13}{100}$

319 LABOR.

Moulding cross-heads and making cores	99	
Moulding collars	15	
Moulding nuts	09	
Putting up and boxing	1 25	
		2 48
Average freight paid	67	
Average commission	$36\frac{25}{100}$	
Average general expense	1 $26\frac{006}{1000}$	
		2 $29\frac{256}{1000}$
Total cost per gross		9 $97\frac{446}{1000}$

Average cost per dozen	$83\frac{1205}{10000}$	
Allowance for cartage, postage, and stationery, per doz	02 $\frac{5}{10}$	
Allowance for cartage, postage, and stationery, per gross	30	
Total cost per doz	$85\frac{625}{10000}$	
Total cost per gross		10 27 $\frac{446}{1000}$

(Endorsed:) Filed May 17, 1876.

COMPLAINANT'S EXHIBIT No. 4.—GEO. J. SICARD, *master*, &c.

GENERAL RECAPITULATION.

Number of dozens of mops sold by O. S. Garretson from March 13, 1874, to May 7, 1875		3,842
Amount received for above		$7,536 70
Cost of the above		3,620 70
Total profit		$3,916 00
Number of dozens sold by Clark & Co. in same time as above		12,699½
320 Total number sold by O. S. Garretson and Clark & Co.		16,541½
Profit per dozen which O. S. Garretson would have made in selling 16,541½ doz		1 10 $\frac{5461}{10000}$
Total profit which O. S. Garretson would have made in selling 16,541½ doz		18,285 95
Profit made by O. Garretson in selling 4,842 doz. mops, deducted from above		3,916 00
Damages sustained by O. S. Garretson by reason of Clark & Co.'s infringement		$14,369 98

(Endorsed:) Filed May 17, 1876.

COMPLAINANT'S EXHIBIT No. 5.—GEO. J. SICARD, *Master*, &c.

Recapitulation of statement of sales of mops by Clark & Co. from March 13, 1874, to May 7, 1875.

Number of dozen sold		12,699½
Total amount of invoices		$23,211 87
Amount of freight paid	$728 02	
Discounts allowed for cash	204 91	

Net amount received	22,278 94	
		23,211 87
Average price per dozen		$1 82 $\frac{85}{100}$
" " gross		21 94 $\frac{27}{100}$
Average of freight per gross		68 $\frac{79}{100}$
Average net receipts per dozen		1 75 $\frac{43}{100}$
" " " " gross		21 05 $\frac{17}{100}$

(Endorsed:) Filed May 17, 1876.

[Complainant's Exhibit No. 6 (Garretson mop), Complainant's Exhibit No. 7 (defendant's mop), and Complainant's Exhibit No. 8 (Taylor mop) are mechanical exhibits.

321 Complainant's Exhibit No. 9 is the wages book of the defendants. (Copy filed.)

Exhibit A is the verified statement of sales, &c., of mop-heads by defendants during the period of the accounting. (Not printed.)]

EXHIBIT B.—GEO. J. S.

This agreement, made and entered into this 10th day of November, A. D. 1871, by and between David M. Smith, Henry H. Mason, and Alvin C. Mason, of the firm of Smith, Mason and Company, and whose place of business is at Springfield, in the State of Vermont, parties of the first part, and Oliver S. Garretson, of Buffalo, in the State of New York, party of the second part, witnesseth:

That the said parties to this agreement, for and in consideration of the mutual promises and agreements of each other as hereinafter contained, have and by these presents do agree as follows, to wit: The said party of the first part agrees to manufacture and sell to all parties wishing the same that certain mop-head, known as Taylor mop-head; and the said party of the second part agrees to manufacture and sell to all parties wishing the same that certain mop-head known as the Garretson mop-head; and said parties mutually agree to sell their said respective mop-heads, and all of them, as demanded, at a certain price to be agreed upon in writing from time to time, and after deducting from said sales the actual amount of freight paid thereon, and the further sum of one dollar and fifteen cents ($1.15) per dozen for all mop-heads so made, to divide the balance of the total amount of said sales equally between the said party of the first part and the said party of the second part.

And the said parties do further agree, in consideration as aforesaid, that in case either party to this agreement shall see fit and deem it

322 necessary for the benefit of all concerned to manufacture and sell any other mop-head, including the Garretson mop-head No. 3 (known as Niagara mop-head), owned or controlled by either party, or which may be hereafter owned or controlled by either party, to this agreement, he or they shall be at liberty to do so subject to the conditions hereinafter set forth. But in case such other mop-head is so deemed necessary for the market, then and in such case the party owning or who has the control of such mop-head shall have the first option and claim of making the same at any price the other party can and will make it for, and after

deducting said price and the actual amount of freight paid on said mop-heads from the total amount of sales the balance shall be equally divided between the parties to this agreement.

And the said parties further agree, in consideration as aforesaid, to make and deliver to each other each and every month a written statement, the first one to be made in the month of December, 1871, and to show the transactions of the month of November, 1871, showing the quantity of mop-heads sold, the price per dozen sold for, the point to which freight is to be deducted from said sales, and the terms of such sales, and in addition to such monthly report said parties are to make and deliver to each other in the months of September and March in each and every year a report or statement showing the actual transactions of each other in said business and the whole thereof, including the amount of money received and the actual amount of freight paid during the period covered and included in said report or statement, said first report or statement shall include all the said transactions of the parties up to the first day of July, 1872, from the date of this agreement, and said second report or statement shall include all said transactions up to the first day of January, 1873, and so on from year to year, and which said report or state-
323 ments shall, whenever required by either party, be verified by the party making the same.

And the said parties further agree, in consideration as aforesaid, to divide the total amounts of said sales as aforesaid, after deducting the freight paid as aforesaid, and the price per dozen of said mop-heads as aforesaid immediately upon the receipt and adjustment of said semi-annual reports or statements.

And it is further agreed, in consideration as aforesaid, that in case it shall appear from the said monthly reports that any amounts over and above five hundred dollars ($500) is, on a final settlement, to be allowed to one of said parties, that the party to whom the same is finally to be paid shall have the right to draw upon the party holding such sum or sums to an amount not exceeding the amount so to be paid to said party whenever it may be deemed necessary so to do by such party so drawing.

And it is further agreed, in consideration as aforesaid, that this contract shall be in force for the full period of the life term or term of said Taylor patent and during the period or existence of any and all extensions of the same; and it is also agreed that the said parties shall neither of them do anything that may in any way or manner injure or hinder the sales provided for and mentioned in this contract, or do any other act or thing detrimental to the mutual interest of the parties to this agreement, but shall in all things well and truly keep and perform this said contract during the said period, or until the same shall be vacated and annulled by mutual consent or operation of law.

And said parties further agree, in consideration as aforesaid, that said party of the first part shall not manufacture or sell the mop-head known as the Garretson mop-head, excepting, however, that mop-head known as the Garretson mop-head number three," or the Niagara mop-head, and the said party of the second part is not to manufacture or sell the Taylor mop-head.

324 And it is further agreed, in consideration as aforesaid, that each party shall keep a set of books relating to and containing the trans-

actions of such party respectively in said business provided for in this agreement, and that either party shall at all reasonable times have free access to the same.

In witness whereof the said parties have hereunto set their hands and seals the day and year first above written.

SMITH, MASON & CO., [L. S.]
Per H. H. MASON. [L. S.]
A. C. MASON. [L. S.]
O. S. GARRETSON. [L. S.]

(Endorsed:) Filed May 17, 1876.

[Defendants' Exhibit C (Manchester mop). Defendants' Exhibit D (Wrought iron mop). Models.]

DEFENDANTS' EXHIBIT E.—GEO. J. SICARD, *Master*, &c.

Statement expenses of manufacturing and selling Clark's mop-heads, from March 13th, 1874, to May 7th, 1875.

MATERIALS PER GROSS.

144 maple and beech handles, 1st quality, @ 22.00 per M,	3 16½
84 lbs. pig-iron, @ 2c. per lb	1 68
12 " No. 7 iron wire, @ 8c. per lb	96
1¼ " O. H. rivets " 17c. "	21¼
¼ " nails " 21c. "	05¼
½ " twine " 27c. "	13½
Copper & stain	10
144 printed labels, 80c. per M	11½
1 case for packing	70

325

LABOR PER GROSS.

84 lbs. average cost per pound for moulding, 2c	1 68
Straightening, cutting, bending, and nicking wire	84
Riveting, tumbling, and coppering heads	1 85
Chucking, tumbling, staining, and putting on handles	1 60
Average freight and cartage	75
Average commission paid, 5 per cent	1 05
Interest on investment, comprising land, buildings, machinery, and capital employed	1 36
General wear of mop machinery	07
General expenses, including salary of foreman of foundry, engineer, book-keeper, cost of fuel, boilers & stoves	84
Add for contingenc'es 5 per cent	08½
Total cost per gross	17 24⅘
Total cost per dozen	$1 43⅔
Total number dozens sold	12,699½

Gross amount received from sales	23,211 87
Total cost of same	$18,244 94
Net profits or about 27 per cent. realized	$4,966 93
From which we deduct for brass metal patterns and machinery abandoned May 7th, 1875, "cost"	227 00
	$4,739 93

Actual net profits from sales, $4,739.93.

RECAPITULATION.

Interest for 13 months and 25 days at 7 per cent. on investment, consisting of land, buildings, machinery, and capital	$4,793 25
County taxes for year 1874	160 45
City " " " "	426 22
Insurance " " "	330 00
	$5,709 92
326 One-fourth (¼) considered as mop business from March 13th, 1874, to May 7th, 1875	1,427 47
Investment, including land, buildings, and capital employed above mentioned	67,444 58
Statement total sales by Clark & Co. from March 13th, 1874, to May 7th, 1875	103,847 02

For the month of March, 1874, one-half (½) of the gross amount of sales is taken, and for the month of May, 1875, one-fourth (¼) of the gross sales is taken.

(Endorsed:) Filed May 17, 1876.

DEFENDANTS' EXHIBIT F.—GEO. J. SICARD, *Master*, &c.

Statement of three-part collar mop-head manufactured and sold by Clark & Co., from September 21st, 1874, to May 7th, 1875.

Total cost per gross	17 24⅔
Total cost per dozen	1 43⅔
Total number dozen sold	5,859½
Gross amount rec'd from sales	10,209 86
Total cost of same	$8,427 43
Total gross amount of profits	$1,782 43
Net profits of all sales from March 13th, 1874, to May 7th, 1875	$4,739 93
From which deduct for three-part collars, September 21st, 1874, to May 7th, 1875	1,782 43
	2,957 50

(Endorsed:) Filed May 17, 1876.

DEFENDANTS' EXHIBIT G.—GEO. J. SICARD, *Master, &c.*

A. E. Bonesteel.
Hamilton & Mathews.
Chedell & Co.
327 S. J. Peters.
Henry Rawles.
St. Clair hardware store.
F. A. Stowell & Co.
J. H. Topel.
Pratt & Co.
Wm. Bingham & Co.
Whittaker, Phillips & Co.
Edwin Hunt & Sons.
Brintnell, Terry & Belden.
W. M. Wyeth & Co.
Clark, Quein & Chalmers.
Hibbard, Spencer & Co.
Wm. Blair & Co.
Ombusch Bros.
John Nazro.
G. W. & A. A. Plummer.
Miller Bros. & Keep.
Wood & Hubbard.
H. C. Spencer.
R. D. Cone.
C. Shepard & Co.
H. D. Wood.
Calkins & Wilcox.
Jas. McCutcheon.
Plowman & Wyckoff
Mayo & Clark.
Nelson & Clark.
W. H. Miller.
Leroy Shepard.
L. C. Risden.
Todd & Jewell.
J. C. Bennett.
J. B. Weller & Son.
Sutton & Swan.
Frank Doere.
Cherritree & Farwells
Standart Bros.
Jones & Harvey.
Kipp & Fowler.
L. H. Bancroft.
H. J. Nelson & Bro.
H. F. Messenger.
F. F. Palmer & Son.
Marshall & Euwer.
Hamilton & Co.
Page Bros. & Kent.
J. H. McFarland.
McCarthy & Redfield.
Pollock, Weaver & Co.
Lane Bros.
Foreman, Smith & Co.
John Pritzlaff.
W. J. Bissell & Son.
S. J. Peabody & Son.
J. M. Warren.
O. H. Hall & Co.
J. C. Rogerson.
W. J. McConnell.
McAboy & Stoughton.
Merriam Bros.
Sherman D. Phelps.
Jas. Bennett.
McCombs, Keller & Byrnes.
Stanbrough & Stratton.
John Candor & Co.
Thos. Lloyd.
G. W. & H. C. Platt.
A. H. Munson.
Bock & Peters.
J. O. Probasco.
Walker, Thompson & Co.
Smith, Cohn & Co.
Harrison & Moore.
J. Harries & Co.
328 F. W. Preston.
W. H. Essig & Son.
Thos. Birney & Co.
Fahnestock & Murray.
Jos. Woodwell & Co.
D. Heim & Son.
S. B. Thompson.
L. Pappenheimer & Co.
Raschoe, Miller & Co.
Dickson, Clark & Co.
Layman, Carey & Co.
Simmons Hardware Co.
Markley, Alling & Co.
R. Haney & Co.
Decamp & Stickney.
Reading & Hunt.
Barron & Hosford.
Strong, Hacket & Chapin.
J. S. Chandler.
W. S. Crum & Co.

McIntosh, Good & Co.
(Present name.)
Terrill & Dunning.
(Present name.)
Byrne & Fitzsimons.
(Present name.)
Barker, Dounce, Rose & Co.
(Present name.)
Horford & Nutting.
C. K. Peck.
W. A. McCall & Co.
Perrin, Gaff & Co.
C. M. Dillon.
Anderson, Bullock & Scofield.
S. B. Haggard.
Morehouse & Wells.
E. A. Eversman.
Rude & Keller.
329 Foster, Stevens & Co.
Burchard & Scott.
R. C. Crocker.
L. D. Webber.
Bennett & Mitchell.
F. C. Plummer.
Boggis Bros.
Little & Campbell.
Spencer & Noftsker.
Wagoner & Forney.
W. J. Sutton.
Lawrence & Meyers.
John C. Hastings.
John Rumsey.
W. B. Orr & Son.
Jacob Reel & Co.
Seeberger & Breakey.
Groschers & Reddison.
Geo. H. Kling & Co.
C. H. Benton & Co.
Dodge & Watrous.
McDonald & Hoard.
C. C. Snyder.
Lockwood, Van Doorn & Miller.
Ducharme, Fletcher & Co.
Harwood Bros.
Hesser & Hale.
D. & F. Husel
Sickels and Preston.
Farnham & Schultz.
F. Geele.
Loder & Sutton.
Everson, Fusselle & Co.
Bingham & Williamson.
Davis & Hunt.
J. Baumester.
K. Church & Co.
Connell & Batten.
S. A. Terrell.
C. H. & W. G. Doud.
Hawks Bros. & Co.
H. A. Mead.
W. A. Stattick.
A. Chandler & Son.
J. F. Schuh.
Rogers, Duck & Lewis.
Sheldon Bros.
Geo. Worthington & Co.
Walsh, Coulter & Flagler.
Bostwick, Brown & Co.
A. Galpin.
Jerome Leonard.
Wagoner & Forney.
Packard & Co.
McLarem, Williams & Co.
A. Ozman & Son.
Compant & Stark.
F. A. Schneider.
Egan, Harper & Co.

(Endorsed:) Filed May 17, 1876.

Defendants' Exhibit H
Defendants' Exhibit I } Mechanical Exhibits.
Defendants' Exhibit J

330 COMPLAINANT'S EXHIBIT NO. 10.—GEO. SICARD, *Master*, &c.

The U. S. Patent Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent and certificate of extension in the matter of

reissue letters patents granted Luke Taylor, dated October 19, 1869, No. 3682 for improved mop-head.

In testimony whereof I, R. H. Duell, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this nineteenth day of April, in the year of our Lord one thousand eight hundred and seventy-six, and of the Independence of the United States the one hundredth.

[L. S.] R. H. DUELL,
Commissioner.

See drawing, page 221.

331 No. 3682 reissue.

The United States of America to all to whom these letters patent shall come:

Whereas Luke Taylor, of Springfield, Vermont, has alleged that he has invented a new and useful improved mop-head (for which letters patent were issued to him dated February 15, 1859, the same surrendered, and new letters issued to him, dated November 10, 1868, which second letters were surrendered and new letters issued to him dated November 24, 1868; which last letters having been surrendered by him, the same have been cancelled, and new letters ordered to issue to him on an amended specification), and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said invention, and that the same hath not, to his knowledge and belief, been previously known or used; has paid into the Treasury of the
332 United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are therefore to grant to the said Luke Taylor, his executors, administrators, or assigns, for the term of fourteen years from the fifteenth day of February, one thousand eight hundred and fifty-nine, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention, a description whereof is given in the annexed schedule and made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this nineteenth day of October, in the year of our Lord one thousand eight hundred and sixty-nine, and of the Independence of the United States of America the ninety-fourth.

333 W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[L. S.] SAM'L S. FISHER,
Commissioner of Patents.

UNITED STATES PATENT OFFICE.

Luke Taylor, of Springfield, Vermont. Letters patent No. 22990, dated February 15, 1859; reissue No. 3192, dated November 10, 1868; reissue No. 3215, dated November 24, 1868; reissue No. 3682, dated October 19, 1869. Improved mop-head.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Luke Taylor, of Springfield, in the county
334 of Windsor and State of Vermont, have invented a new and improved mop-head; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an external view of my invention.

Figure 2 is a longitudinal section of the same taken in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the handle of the mop-head, said handle being constructed of a tough, elastic wood, and B represents the stationery jaw of the head, which is of T-form, one portion, *a*, being a socket, which is fitted on the end of the handle A, and secured permanently thereto by means of rivets, *a'*, one or more.

On the handle A, below the socket *a*, and between said socket and
335 a shoulder, *a**, on the handle, a collar, C, of cast-iron is placed, and allowed to turn freely, the lower end of said collar having projections, *b*, attached, for the purpose of allowing said collar to be readily turned by the hand, or thumb and fingers.

On this collar there is cast a screw-thread, *c*, on which a nut, D, works; the nut D is provided with projecting ears, *c' c'*, at opposite sides of it, and to these ears, *c' c'*, the ends of a jaw, E, are attached.

The jaw E is formed of a curved wrought-iron rod, so bent that a portion, *d*, of it will be paral'el with the portion *e* of the stationery jaw B, and the remaining portions, *f f*, so bent that they will pass around the ends of the stationery jaw B, fitting in recesses therein, and serving as guides, and their lower parts curved so as to be attached to the projecting ears *c' c'* of the nut D, as shown clearly in Figure 1.

The stationery jaw B may be of cast-iron, malleable, if desired, and the collar C, with its screw, *c*, may be of the same material.

336 From the above description it will be seen that by simply turning the collar C, the jaw E will be moved in and out from the stationery jaw B, and the cloth or mop firmly secured in the head or between the two jaws, and also readily released or detached therefrom when necessary.

I am aware that the nut operating the movable jaws or binders of mop-heads have been manipulated by means of a nut, with ears or projections placed between the movable jaws or binders and the cross-head.

I am also aware that mop-heads have been made with an external screw-

thread of wrought-iron or wood, cut on the handle or shaft, and working into a wrought-iron nut, or internal screw cut into the cross-head or yoke of a movable jaw, but the wooden screw, by reason of its swelling and binding when wet, and the wrought-iron screw rusting and binding, and the fineness or closeness of the screw-threads, made the process of
337 tightening and loosening the mop a slow process, and rendering the mop-head thus constructed inoperative and of little value. These, therefore, I do not claim broadly, or in themselves considered; but what I do claim as new, and desire to secure by letters patent, is—

1. In a mop-head, in which the cross-head or stationery jaw is attached permanently and immovably to the handle, operating the movable jaw or binder by means of a tubular screw or socket fitted on the handle, and having its screw-thread on its exterior, in combination with a nut encompassing the screw, and connected with the movable jaw, so as to operate substantially as shown and described.

2. In a mop-head, in which the movable jaw or binder is operated through the medium of a screw-nut or collar, by means of thumb-ears attached to or found with the said screw-nut or collar, placing the said ears outside the yoke or bow of the movable jaw or binder aforesaid, as herein described, for the purpose set forth.

338 LUKE TAYLOR.

Witnesses:
S. J. YOUNG.
JAMES DAVIS.

Certificate of extension.

Whereas upon the petition of Luke Taylor, of Springfield, Vermont, for the extension of the patent granted to him February 15, 1859, reissued November 10, 1868, again reissued November 24, 1868, and again reissued October 19, 1869, for an improved mop-head, the undersigned, in accordance with the act of Congress approved the 8th day of July, 1870, entitled "An act to revise, consolidate, and amend the statutes relating to patents and copyrights," did on this eleventh day of February, 1873, decide that said patent ought to be extended.

Now, therefore, I, John M. Thacher, Acting Commissioner of Patents, by virtue of the power vested in me by said act of Congress, do renew
339 and extend the said patent, and certify that the same is hereby extended for the term of seven years from and after the expiration of the first term, viz, from the fifteenth day of February, 1873, which certificate being duly entered of record in the Patent Office, the said patent has now the same effect in law as though the same had been originally granted for the term of twenty-one years.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed this eleventh day of February, 1873, and of the Independence of the United States the ninety-seventh.

[L. S.] J. M. THACHER,
Acting Commissioner.

(Endorsed:) Filed May 17, 1876.

340 DEF'TS' EXHIBIT K.—GEO. J. SICARD, *Master, &c.*

No. 166342.

The United States of America to all to whom these presents shall come:

Whereas Charles B. Clark, of Buffalo, New York, has presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful improvement in mop-heads, a description of which invention is contained in the specification of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said Charles B. Clark, his heirs or assigns, for the term of seventeen years from the third day of August, one thousand eight hundred and seventy-five, the exclusive right to make, use, and vend the said invention throughout
341 the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this third day of August, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States of America the one hundredth.

[L. S.]

B. COWEN,
Acting Secretary of the Interior.

Countersigned:

J. M. THACHER,
Commissioner of Patents.

(Here follows diagram marked page 342.)

343 UNITED STATES PATENT OFFICE.

Charles B. Clark, of Buffalo, New York. Improvement in mop-heads. Specification forming part of letters patent No. 166342, dated August 3, 1875; application filed July 6, 1875.

To all whom it may concern:

Be it known that I, Charles B. Clark, of the city of Buffalo, county of Erie and State of New York, have invented a new and useful improvement in mop-heads, of which the following is a specification:

My improvement relates to that class of mop-heads constructed with a fixed jaw and a yoke or collar carrying a movable wire jaw by means of a thumb-nut rotating upon the fixed jaw.

It is the object of my invention to simplify and strengthen the construction of the collar, and to secure thereto the ends of the binding wire
344 without the usual method of riveting the same, or of employing additional rivets to secure the wire between divided portions of the collar, also to construct and arrange the thumb-nut so that the movable jaw may be quickly and efficiently operated. To this end the improvement consists in casting the collar in one piece, with an annular seat for

the flange of the nut, and in casting therein suitable cavities, into which the ends of the wire are set or bent after passing through the drilled holes in the arms of the collar. It also consists in forming the thumb-nut with a flange which fits into the annular seat of the collar when the jaws are clamped together as hereinafter set forth and claimed.

Figure 1 is a side elevation of my improved mop-head. Fig. 2 is a sectional elevation of the same, showing the manner of securing the ends of the binding-wire to the collar. Fig. 3 is a detail view of the nut and collar, the arms of the latter being shown in section. Like letters refer to similar parts in all the views.

In Fig. 1 A represents the cross-head, provided with the hollow
345 shank E, into which the wooden handle F is fitted. B is the collar of the movable jaw C, and slides freely upon the shank E. The ends *a a* of the wire jaw C are attached to the arms *b b* of the collar B. This collar is cast in one piece with an opening for the shank E and with an annular seat, *f*, to receive the flange *g* of the nut D. The arms *b b* of the collar B are drilled, the holes terminating in cavities, *d d*, into which the ends *a a* of the wire C, after passing through the drilled holes, are bent or set with a punch, which securely fastens them into the arms of the collar. This method of securing the wire to the collar is stronger and more compact than other means hitherto employed, and constitutes the main feature of my invention.

The thumb-nut D is provided with ears, *e e*, and an internal thread, *e*, which engages with the lugs on the shank E. The nut is placed underneath, and can be moved independently of the collar B, being in contact with it only when clamping the mop-cloth, in which case the flange *g* of
346 the nut enters the annular seat *f* of the collar, as seen in Figs. 2 and 3.

The engagement of the nut and collar in this manner presents a large surface for adhesion, which prevents the nut working loose, and also allows a wide internal bearing of the nut upon the shank.

The ease and rapidity of rotating the thumb-nut in this mop permit a readier adjustment of the movable jaw than in those mops having the nut and collar connected and moving together, while its location beneath the collar guards the thumb-ears against all danger of breaking off.

The three pieces of castings composing this mop-head are easily molded, and require no extra fitting except the drilling for the binding-wire, and when put together form a neat and superior article.

What I claim as new, and desire to secure by letters patent, is—

1. The solid collar B, provided with the cavities *d*, and hollow arms *b*, whereby the wire C is received, and the ends *a* bent down, as described and shown.

347 2. The combination of the nut D, having flange *g*, the solid collar B, having the annular seat *f* and the cavities *d*, and a fixed and movable jaw, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES B. CLARK.

Witnesses:

FRANK C. FERGUSON.

HENRY R. CLARK.

(Endorsed:) Filed May 17, 1876.

340 DEF'TS' EXHIBIT K.—GEO. J. SICARD, *Master, &c.*

No. 166342.

The United States of America to all to whom these presents shall come:

Whereas Charles B. Clark, of Buffalo, New York, has presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful improvement in mop-heads, a description of which invention is contained in the specification of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said Charles B. Clark, his heirs or assigns, for the term of seventeen years from the third day of August, one thousand eight hundred and seventy-five, the exclusive right to make, use, and vend the said invention through-
341 out the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this third day of August, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States of America the one hundredth.

[L. S.]

B. COWEN,
Acting Secretary of the Interior.

Countersigned:

J. M. THACHER,
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343 UNITED STATES PATENT OFFICE.

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My improvement relates to that class of mop-heads constructed with a fixed jaw and a yoke or collar carrying a movable wire jaw by means of a thumb-nut rotating upon the fixed jaw.

It is the object of my invention to simplify and strengthen the construction of the collar, and to secure thereto the ends of the binding wire
344 without the usual method of riveting the same, or of employing additional rivets to secure the wire between divided portions of the collar, also to construct and arrange the thumb-nut so that the movable jaw may be quickly and efficiently operated. To this end the improvement consists in casting the collar in one piece, with an annular seat for

the flange of the nut, and in casting therein suitable cavities, into which the ends of the wire are set or bent after passing through the drilled holes in the arms of the collar. It also consists in forming the thumb-nut with a flange which fits into the annular seat of the collar when the jaws are clamped together as hereinafter set forth and claimed.

Figure 1 is a side elevation of my improved mop-head. Fig. 2 is a sectional elevation of the same, showing the manner of securing the ends of the binding-wire to the collar. Fig. 3 is a detail view of the nut and collar, the arms of the latter being shown in section. Like letters refer to similar parts in all the views.

In Fig. 1 A represents the cross-head, provided with the hollow
345 shank E, into which the wooden handle F is fitted. B is the collar of the movable jaw C, and slides freely upon the shank E. The ends *a a* of the wire jaw C are attached to the arms *b b* of the collar B. This collar is cast in one piece with an opening for the shank E and with an annular seat, *f*, to receive the flange *g* of the nut D. The arms *b b* of the collar B are drilled, the holes terminating in cavities, *d d*, into which the ends *a a* of the wire C, after passing through the drilled holes, are bent or set with a punch, which securely fastens them into the arms of the collar. This method of securing the wire to the collar is stronger and more compact than other means hitherto employed, and constitutes the main feature of my invention.

The thumb-nut D is provided with ears, *c c*, and an internal thread, *e*, which engages with the lugs on the shank E. The nut is placed underneath, and can be moved independently of the collar B, being in contact with it only when clamping the mop-cloth, in which case the flange *g* of
346 the nut enters the annular seat *f* of the collar, as seen in Figs. 2 and 3.

The engagement of the nut and collar in this manner presents a large surface for adhesion, which prevents the nut working loose, and also allows a wide internal bearing of the nut upon the shank.

The ease and rapidity of rotating the thumb-nut in this mop permit a readier adjustment of the movable jaw than in those mops having the nut and collar connected and moving together, while its location beneath the collar guards the thumb-ears against all danger of breaking off.

The three pieces of castings composing this mop-head are easily molded, and require no extra fitting except the drilling for the binding-wire, and when put together form a neat and superior article.

What I claim as new, and desire to secure by letters patent, is—

1. The solid collar B, provided with the cavities *d*, and hollow arms *b*, whereby the wire C is received, and the ends *a* bent down, as described and shown.

347 2. The combination of the nut D, having flange *g*, the solid collar B, having the annular seat *f* and the cavities *d*, and a fixed and movable jaw, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES B. CLARK.

Witnesses:

FRANK C. FERGUSON.

HENRY R. CLARK.

(Endorsed:) Filed May 17, 1876.

348 Circuit court of the United States for the northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK ET AL. } April 28, 1875.

WOODRUFF, *Circuit Judge:*

My conclusions in this case are, that the patents of the complainant, whereon this suit is founded, are valid patents and owned by the complainant as alleged in the bill of complaint; not anticipated by any of the devices set up by the defendants as showing want of novelty, or as showing that the patentees were not the first and inventors.

2. That Clark and Garretson were the joint inventors of the mop-heads, or the combinations of devices claimed in the patent granted to them, numbered 54860, bearing date May 22d, 1866, and that the complain-
349 ant is by assignment the owner and holder thereof as alleged in the bill of complaint.

3d. That the defendants' mop-heads, which it was admitted they manufactured, do infringe the first claim of the said letters patent of May 22d, 1866, and the whole claim of the letters patent No. 67643, dated 13th August, 1867.

Let a decree be entered accordingly in favor of the complainant awarding an injunction and an account of profits and damages.

(Endorsed:) Filed April 30, 1875.

350 United States circuit court, northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK ET AL.

The question before the master to be determined is as to the amount of damages resulting to the complainant from the infringement referred to in the decree.

The decree adjudges that the defendants' mop-heads, which it was admitted they manufacture, do infringe the first claim of the complainant's letters patent No. 54860, and the whole claim of his letters patent No. 67643.

For the purpose of this decision these infringed claims may be considered as consolidated.

They cover the connection of the nut with the collar which carries the moveable jaw by means of the lugs, or their equivalent, in combination with the threaded shank of the fixed jaw, and the construction of the collar in two parts, so that the nut may be placed between them, &c.

Now, what damages would the master be warranted in finding, from the evidence submitted to him, as properly chargeable to the defendants' infringement of these claims? The burden of proof is clearly upon the complainant, according to all the cases, and if the complainant fails to satisfy the master that he has been damaged by reason of the infringement of his improvement, it is the duty of the master to report nominal damages only in his favor.

The rule of damages laid down by the circuit court in Gould's M'f'g Co. vs. Cowing, 12 Blatchford, 245, is that when the patent is for an improvement of a machine the complainant can recover only such dam-
351 ages as are occasioned by the use of the improvement, and the inquiry is what profit or advantage did the defendants acquire by reason of their use of the improvement only, and not by the manufacture of the whole instrument.

In support of that rule other decisions are cited, and I suppose the decision I have quoted must be considered binding and conclusive upon the master in this case, as settling the law for his guidance.

All the evidence in this case offered by the complainant has been with the view of showing the damages to him and the profits to the defendants in the manufacture of the competing and infringing mop as a whole.

There has been no evidence before me that would warrant a finding that the whole success of the mops in question, either of the defendants' or the complainant's manufacture, was due to the peculiar construction described in the claims of the patents above referred to.

Nor could I find from the evidence that that peculiar construction constituted the sole feature that made the mops a success in the market.

Such finding would be required to sustain the complainant's theory of damages.

The evidence showed that Garretson had invented and patented an improvement in mops; that the mops made by him and embodying the improvement were successfully introduced into the market; that, after the manufacture and introduction by the defendants of the infringing article, the trade of the complainant had decreased, and there was much documentary and other evidence produced to show the amount of the cost and of the sales by both parties.

All this testimony was given on the theory, which is the complainant's position in this case, as I understand it, that the claims infringed are indispensable to the success of the mop, and form the only vital part and principle of its operation. In other words, it is claimed that this mode
352 of construction, connection, and operation of the collar and loose jaw is all there is, practically speaking, of the mop.

By the patents themselves, and the claims thereof, it is clear that the complainant's invention is not of a machine, but of an improvement. He has taken the mop, an instrument in use from time immemorial, and claims that by the introduction of a new mode of constructing and operating it in one of its parts, he has added to it all that is valuable in it.

The complainant has given before me no evidence aimed at the separation of the damages or the apportionment of a certain percentage or proportion of the defendants' profits in manufacturing mops, as belonging to the peculiar features which are the complainant's invention, and which the defendants have wrongfully adopted and incorporated into the instrument made and sold by them. He rests all his evidence on the proposition that his invention covers the whole ground and lends to the article manufactured by the defendants all its value.

I cannot agree to that view upon the evidence submitted.

The complainant's invention has peculiar and distinctive features in the form of construction and operation referred to, but these feature alone do not constitute a mop, and there were many valuable mops in the market

before these features were at all introduced. The evidence shows many such mops as made in the past, and even as made in the present, for the defendants appear to be now selling with success a mop not claimed to infringe the complainant's invention.

The complainant has given no testimony before me to satisfy my mind that the sole salability of the mops in question arose from their possessing the features I have referred to as embodied in the complainant's invention.

These features are the form of construction of the collar in two
353 pieces, the mode of connecting the collar and the nut, the presence of flanges on the latter, and its enclosure within the circuit of the former. The nut, the collar, the wire-binder, the cross-head fixed and riveted to the handle, the grooving of such cross-head, the notching of its ends to steady and guide the wire-binder, the threaded shank, the connection and securing of the wire-binder to the collar; all these are independent of the plaintiff's improvement, and most of them are old in the history of the invention.

Yet they contribute to the successful operation of the mop, and are found in the mops of the complainant as well as those made by the defendants.

Combinations of these various elements of invention in different forms are found in most, if not all, of the exhibits in the case. Some of these elements are common to all the successful mops spoken of by the witnesses, and may be considered as quite indispensable to the construction and practical operation and salability of the instrument.

I cannot believe that none of them contributes any value to the mops in question.

As these elements and combinations exist in the mop made and sold by the defendants, and adjudged to be an infringement, the finding of more than nominal damages for the complainant would, on the complainant's theory, involve the proposition that there is not among all of these elements or combinations any one that involves a principle of sufficient practical use to add to the salability or actual value of the machine.

I believe on the contrary that all of these elements have combined to make the mops in question successful, and it is too much to say that no proportion of the trade diverted from the complainant by the defendants, or of the profits they realized from the sale of their mop, was due to the presence of some one or more of them.

354 At least, while so many elements of success are present in the instrument I would not be warranted in finding that its entire success was due to its embodiment of the complainant's invention, unless direct evidence on that subject were furnished.

As no evidence has been given before me of damages resulting to the complainant or of profits accruing to the defendants from the manufacture and sale of the improvement of the complainant as distinguished from the machine itself—

I find for the complainant nominal damages only.

GEO. J. SICARD, *Master, &c.*

Dated Buffalo, May 15, 1876.

(Endorsed:) Master's opinion. Filed May 17, 1876.

355 Circuit court of the United States for the northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK AND OTHERS.

BLATCHFORD, *J.:*

The bill in this case is founded on two patents. One of them was granted to Charles B. Clark and Oliver S. Garretson, May 22d, 1866, for an "improved mop-head."

The specification states that the invention consists, 1, "in the combination of a collar provided with wings, or their equivalent, which carry the movable jaw, and an adjusting nut with which it is connected by means of a flange and lugs, with a threaded shank and fixed cross-head;" and, 2, "in the manner of connecting the wire-frame which constitutes the movable jaw with the arms of the collar."

The patent has two claims: 1, connecting the nut with the collar which carries the movable jaw by means of the lugs or their
356 equivalents in combination with the threaded shank of the fixed jaw, arranged and operating substantially as set forth; 2, connecting the movable jaw with the collar by means of the bows, constructed and operating substantially in the manner and for the purposes specified.

The other patent was granted to Oliver S. Garretson August 13th, 1867, for an "improved mop-head."

The specification states that the invention consists "in constructing that part of the loose jaw that forms the collar in two parts or halves, with the inner surfaces properly grooved to receive and retain the flange or wings of the nut, and to allow it to have a free rotatory motion by which means the parts with the recesses and rivet-holes may be cast complete, requiring no drilling or reaming in putting together."

The claim is: Making the collar of the loose jaw in two parts so that the nut may be placed between them, and when connected together
357 the collar surrounds the nut and retains it in position for the purpose above set forth.

In April, 1875, on the final hearing on pleadings and proofs, an interlocutory decree was entered, finding that the defendants had infringed the first claim of the patent of 1866, and the whole claim of the patent of 1867, and decreeing that the plaintiff "recover of the defendants the profits made and received by the defendants, and the damages, if any, over and beyond the amount of such gains and profits suffered by the complainant by reason of the infringement and violation of the rights of the complainant, which it is adjudged have been so committed by the defendants," and referring it to a master, George J. Sicard, esquire, to take proofs of, and to compute the amount of, the said profits and damages, and report the same to the court, and awarding a perpetual injunction against the defendants. The master has filed his report, by which he finds that the plaintiff has not offered before him evidence of the damage suffered by
358 the plaintiff, or of profits realized by the defendants by reason of the infringement and violation by the defendants of the rights of the plaintiff in the invention and improvements referred to in the decree,

and that the plaintiff is entitled under said decree to nominal damages only against the defendants. The master has stated at length his reasons for his finding. He proceeds upon the view that it is settled law that, when a patent is for an improvement of a machine, the plaintiff can recover only such damages as are occasioned by the use of the improvement, and the injury is as to what profit the defendant acquired by reason of his use of the improvement alone, and not by the manufacture of the whole machine. The master states, and the record shows, that all the evidence offered by the plaintiff has been with the view of showing the damages to him, and the profits to the defendants in the manufacture of the infringing mop as a whole.

359 At the close of the evidence given before the master on the part of the plaintiff, the defendants moved to dismiss the proceedings on the ground that no basis had been laid for the master to compute or estimate the plaintiff's damages and that consequently the plaintiff was entitled to only nominal damages. The point was reserved and the defendants put in evidence on the basis assumed by the plaintiff. The master says: "There has been no evidence before me that would warrant a finding that the whole success of the mops in question, either of the defendants' or of the complainant's manufacture, was due to the peculiar construction described in the claims of the patents above referred to. Nor could I find, from the evidence that that peculiar construction constituted the sole feature that made the mops a success in the market. Such finding would be required to sustain the complainant's theory of damages.

360 "The evidence showed that Garretson had invented and patented an improvement in mops; that the mops made by him and embodying the improvement were successfully introduced into the market; that, after the manufacture and introduction by the defendants of the infringing article, the trade of the complainant had decreased; and there was much documentary and other evidence produced to show the amount of the costs and of the sales by both parties. All this testimony was given on the theory, which is the complainant's position in this case, as I understand it, that the claims infringed are indispensable to the success of the mop and form the only vital part and principle of its operation. In other words, it is claimed that this mode of construction, connection, and operation of the collar and loose jaw is all there is, practically speaking, of the

361 mop. By the patents themselves, and the claims thereof, it is clear that the complainant's invention is not of a machine, but of an improvement. He has taken the mop, an instrument in use from time immemorial, and claims that, by the introduction of a new mode of constructing and operating it in one of its parts, he has added to it all that is valuable in it. The complainant has given before me no evidence aimed at the separation of the damages, or the apportionment of a certain percentage or proportion of the defendants' profits in manufacturing mops, as belonging to the peculiar features which are the complainant's invention, and which the defendants have wrongfully adopted and incorporated into the instrument made and sold by them.

"He rests all his evidence on the proposition that his invention covers the whole ground and lends to the article manufactured by the defendants all its value. I cannot agree to that view, upon the evidence

362 submitted. The complainant's invention has peculiar and distinct-

ive features in the form of costruction and operation referred to, but these features alone do not constitute a mop, and there were many valuable mops in the market before these features were at all introduced. The evidence shows many such mops as made in the past, and even as made in the present, for the defendants appear to be now selling with success a mop not claimed to infringe the complainant's invention. The complainant has given no testimony before me to satisfy my mind that the sole salability of the mops in question arose from their possessing the features I have referred to as embodied in the complainant's invention. These features are the form of the construction of the collar in two pieces, the mode of connecting the collar and the nut, the presence of flanges on the collar, and its enclosure within the circuit of the former. The nut, the
363 collar, the wire-binder, the cross-head fixed and rivetted to the handle; the grooving of such cross-head, the notching of its ends to steady and guide the wire-binder, the threaded shank, the connection and securing of the wire-binder to the collar; all these are independent of the plaintiff's improvement, and most of them are old in the history of the invention. Yet they contribute to the successful operation of the mop, and are found in the mops of the complainant as well as those made by the defendants. Combinations of these various elements of invention in different forms are found in most if not all of the exhibits in the case. Some of these elements are common to all the successful mops spoken of by the witnesses, and may be considered as quite indispensable to the construction and practical operation and salability of the instrument. I cannot believe that none of them contributes any value to the mops in question.

364 "As these elements and combinations exist in the mop made and sold by the defendants, and adjudged to be an infringement, the finding of more than nominal damages for the complainant would, on the complainant's theory, involve the proposition that there is not among all of these elements or combinations any one that involves a principle of sufficient practical use to add to the salability or actual value of the machine. I believe, on the contrary, that all of these elements have combined to make the mops in question successful, and it is too much to say that no proportion of the trade diverted from the complainant by the defendants, or of the profits they realized from the sale of their mop, was due to the presence of some one or more of them.

"At least, while so many elements of success are present in the instrument, I would not be warranted in finding that its entire success
365 was due to its embodiment of the complainant's invention, unless direct evidence on that subject were furnished.

"As no evidence has been given before me of damages resulting to the complainant, or of profits accruing to the defendants from the manufacture and sale of the improvement of the complainant as distinguished from the machine itself, I find for the complainant nominal damage only." The plaintiff has excepted to the master's report. The exceptions insist that the actual damages to the plaintiff for the mops made and sold by the defendants' infringement, which the plaintiff would have made and sold but for the infringing manufacture and sale by the defendants, are the difference between what the manufacture and sale of such mops would have cost the plaintiff, and the amount for which the plaintiff would have sold such mops; and that the amount of the profits made and received by the

defendants by reason of the infringement adjudged is the difference
366 between what the manufacture and sale of the infringing mops made and sold by the defendants cost the defendants, and the amount for which the defendants sold said infringing mops.

There is thus a pointed antagonism between the views of the master and those contended for by the plaintiff. I have cited thus fully the text of the master's views, because it would be difficult to express in more apt words the considerations properly applicable to the determination of the questions involved in this case. They may be amplified and illustrated, but the master has expressed with clearness and force the true principles which, on the evidence before him, apply to this case.

The argument on the part of the plaintiff is that at the time the defendants began to infringe, the plaintiff's mop and the mop of one Taylor held a monopoly of the market and were not competed with seriously by other mops, or to an extent which interfered with an arrangement which had been made between the proprieters of the patents covering the
367 plaintiff's mop and the proprieters of the patent covering the Taylor mop, whereby the price of those two mops was maintained at $2 a dozen, affording a profit of at least $1 a dozen; that the defendants sold the infringing mop at $1.75 a dozen; that the plaintiff had an establishment at which he could have made mops enough to fill all ordinary orders for mops; that his mop was known and his trade was established; that the effect of the infringement was to cause a large falling off in the plaintiff's sales; that it was the taking without right of the plaintiff's patented improvements, which enabled the defendants to enter the mop market, because the plaintiff's mop and the Taylor mop had substantially driven out of the market all other mops by making it impossible to sell such other mops at a profit; that while it is generally true that the patentee of an improvement in an article is not entitled to the profits on the sale of the whole article, the rule is otherwise, when, as a matter
368 of fact, the improvement so dominates and controls the article in the market held as an exclusive monopoly by the patentee, that the only way in which the article can be sold at all at a profit is through the sale of it with the patented improvement; that the advantage which the defendants gained was a market for mops at a large profit, when there was no other form of mops open to the public by which they could have obtained any considerable sale at a profit; and that the only way to reach a result consonant with the substantial justice of this case is to regard the mop as an article of commerce under the operation of laws whereby an improved article will supersede and displace an 'improved one, destroying the possibility of producing it at a profit, and thus driving it out of existence, so that the superior article, by virtue of its superiority, dominates the market until it in turn gives way in the progress of new improvements in its kind. It is a weak point in the argument for
369 the plaintiff that it assumes without sufficient evidence, that the market for the plaintiff's mop was made solely by the fact that the mop contained the improvements patented by the plaintiff's patents. This would not follow, even from the fact that the mop with such improvements had driven other mops out of the market. Energy, diligence, business tact, superior facilities and skill, and fortuitous circumstances, contribute largely to the success in the market of even an article which has all the superiority in its line that is claimed for the plaintiff's mop.

In the present case there was an especial element, entirely outside of the plaintiff's patents, which made the manufacture and sale of the plaintiff's mop profitable, and that was the combination with the owners of the Taylor patent under which the price of both mops was fixed at $2 a dozen.

The argument on the part of the plaintiff leads to the conclusion
370 that when an article or a machine with a given patented improvement embodied in it has a controlling preference in the market over the article or machine which does not embody such improvement, it must be conclusively inferred that such preference is due to their improvement and that the patentee, in case of infringement, is entitled to the profits made by the infringer from the manufacture and sale of the whole article or machine, and is entitled as damages to the profits he would have made on the manufacture and sale of an equal number of entire articles or machines with the number of entire articles or machines made and sold by the infringer. This would often cause a small improvement on a costly machine to draw to itself very large profits, entirely out of proportion to the relation existing between the improvement and the rest of the machine, and in cases where the unpatented parts of the machine were quite
371 as indispensable to the machine as the patented improvement, and even more indispensable. The profit on the entire machine would virtually become the license fee for the use of the patented improvement. In the case of a machine embodying several patented improvements in infringment of several patents belonging to several different persons, each patentee would claim that it was his particular patented improvement which caused the machine to dominate the market and each would claim the profits of the manufacture and sale of the entire machine and damages based on the same principle. The patentee must in every case give evidence tending to separate or apportion the defendant's profits, and the patentee's damages, between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative, or he must show by equally reliable and satisfactory evidence that the profits and damages are to be calculated on the whole
372 machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature. In the present case the master reports that the patentee has failed to give such evidence, and I concur with the master in his conclusion.

The plaintiff's exceptions to the master's report are all of them overruled. Those which relate to the admission of testimony objected to by the plaintiff (conceding that such objections can be availed of by exceptions to the master's report) became immaterial in view of the fact that because the plaintiff failed to give adequate evidence as to profits and damages the defendants were not put upon their defence in that respect, and it is unimportant whether they gave competent evidence or no evidence. If the evidence objected to is all stricken out the defendants are protected by the plaintiff's failure. They are not called upon to rebut until the
373 plaintiff has made out a case. (Black v. Munson, 14 Blatchf., C. C. R., 265.)

The 18th exception, that the master excluded material evidence offered by the plaintiff and sustained the defendants' objections thereto is too general. The 19th exception, that the master received in evidence

testimony offered by the defendants and overruled the plaintiff's several objections thereto, is too general.

The exceptions being overruled, the plaintiff asks that the case be referred back to the master, with instructions setting forth the principles on which the proper assessment of damages and profits should be made, and directing the master to receive such further evidence pertinent thereto as the parties may offer. This application is not made on any showing that the plaintiff failed, through inadvertence, to give other or further evidence, or that there exists any other or further evidence which he can give. The idea of inadvertence is negatived by the entry on the record, before
374 referred to, at the close of the plaintiff's testimony, when the defendants moved to dismiss the proceedings on the ground assigned. No proper foundation is laid for granting the application.

There must be a decree in accordance with the master's report, and awarding to the plaintiff the costs of the suit, except the cost of the reference before the master and of his report and of the exceptions and of the hearing thereon, and awarding to the defendants the costs of such reference and report and exceptions and hearing.

James A. Allen, for the plaintiff.
Francis A. Macomber, for the defendant.

(Endorsed:) Filed July 15, 1878.

375 United States circuit court for the northern district of New York.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHAS. B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, and HENRY R. CLARK, defendants. } In equity.

To the honorable the judge of the circuit court of the United States in the second circuit, in and for the northern district of New York.

The petition of Oliver S. Garretson, the above-named complainant, respectfully showeth:

That your petitioner finds himself much aggrieved by an order made by your honor in the above-entitled suit on the 15th day of July, A. D. 1878, whereby it is declared that the cause having come for a hearing at the stated term of said court held at the village of Canandaigua, commencing on the third Tuesday of June, 1878, upon exceptions taken by the complainant to the report of the master herein, after argument by counsel for the respective parties, ordered that a decree be entered in accordance with the master's report, and awarding to the plaintiff the costs of the suit except the costs of the reference before the master and of his report and of the exceptions and of the hearing thereon, and awarding to
376 the defendants the costs of such reference and report and exceptions and hearing.

That under and in pursuance of the said order no final decree in the said cause has yet been entered or recorded or enrolled, nor has there been, as your petitioner is informed and believes, any taxation of costs or other proceedings of record thereunder.

That your petitioner submits that the said order is unjust to your peti-

tioner and erroneous in its result, for reasons which he humbly craves leave to set forth, as follows, viz:

The consideration given to the case by the master as shown by his opinion embraces substantially the question whether the position taken by the complainant and stated in the sixth and seventh exceptions to the master's report (fol. 532–6 master's record), was a correct one, and in reviewing the master's report the attention of the court, so far as relates to the general merits of the case, appears to have been restricted to the same question, the result reached being that if the theory of the plaintiff was untenable as to what should constitute the full measure of his recovery of profits and damages his basis for a recovery must fail wholly. Your petitioner believes that, assuming the main argument of the master, in his opinion, to be correct in negativing under the proofs in the case the right of the complainant to recover damages estimated on the whole article, or the entire profits made by the defendants on the infringing mops manufactured and sold by them, there was evidence in the case, proper for the consideration of the court, separating and apportioning the complainant's damages between the patented and unpatented features, of the kind which was proper and appropriate to the nature of the case, and under which the said master should have proceeded to assess and apportion in
377 favor of the said complainant the damages and profits which were due distinctively to the patentee's inventions.

Your petitioner says that by the master's report herein the said master found and reported (master's record, fol. 523) "that the complainant in this case has not offered before me evidence of the damages suffered by him, or of the profits realized by the defendants by reason of the infringement and violation by the defendants of the rights of the complainant in the invention and improvement referred to in the decree," and as a conclusion therefrom "that the said complainant is entitled under said decree to nominal damages only;" that the first exception of your petitioner to said report is (fol. 528) that the master ought to have certified that the said complainant had offered before said master evidence of damages suffered by him, as well as of the profits realized by the defendants by reason of the infringement and violation by the defendants of the rights of the complainant in the inventions referred to; that your petitioner's second exception to said report is (master's record, fol. 529) that the said master hath in and by said report certified that the said complainant is entitled under said decree to nominal damages only, whereas he ought to have certified that the complainant was entitled under the decree and the proofs before said master to actual damages, and ought to have assessed in favor of said complainant the amount of such actual damages and reported the same; and that the third, fourth, and fifth exceptions of the complainant are to the master's refusal to certify that the complainant had produced proofs before him of actual damages, or to assess or compute the amount of actual damages shown by the proofs which the complainant had sustained by reason of the infringement, or to assess or compute the amount shown by the proofs of actual profits made by the defendants by reason of their infringement.

378 Your petitioner further says that in view of the opinions of the said master and of the court, which have been filed, he finds cause to believe that the substantial question which has been considered under

the proofs has been whether the complainant's right of recovery existed in his behalf to the extent which was claimed on his part, rather than whether under such proofs such right existed at all or in any measure.

Your petitioner says that he believes that there is but one practicable mode of ascertaining, in the case of an improved article of manufacture like the mop, which is put into the general market of the country, the relative values which the features of improvement bear to each other, or to the unimproved components of the article, and that the mode consists in a reference made to the actual market during the period of time involved for the purpose of comparing the profits which can be realized by the article appearing in the different forms material to the inquiry. That in the case of a merchantable article manufactured for sale there could be no other feasible test for ascertaining what profits are due to one combination of features, as distinguished from other features, patented or unpatented, connected with the mechanism.

Your petitioner believes that by the proofs which were given before the master in this case substantially full light was given during the period covered by the defendants' infringement, and for a considerable time prior thereto, as to the mop market of the country, the individual mops on sale, and the merchantable values of and the profits made upon them in all the forms in which they existed in market.

Your petitioner believes that the evidence given in his behalf in the premises was reliable and tangible, and not conjectural or speculative, and that such evidence affords a proper basis within the substantial in-
379 terpretation of the law given by the court for assessing in favor of the complainant the profits and damages which were apportionable to the patented improvements, as distinguished from profits of other features of the mechanism which were unpatented.

The complainant called as a witness Henry H. Mason, who had been a manufacturer of mops since 1860, and was at the head of the Springfield house of Smith, Mason & Co. (fol. 209, 210), a firm which for many years had sold the greater portion of all the mops marketed in the country. (Master's record, fol. 279.) This witness was one entirely qualified to speak on the subject in question.

Ques. From the close of 1871 down to March, 1874, what other mops, if any, were on sale in the country than the Taylor and Garretson mops, and what was the character of the trade in them, if any?

Ans. There was a mop known in New York State as the Manchester mop, manufactured by Mr. Manchester. It was sold somewhat to the trade; I could not say how large the amount was, but should judge there were two or three thousand dozens, sold in 1872 and 1873, but not many in 1874 and 1875. It never interfered with our maintaining our prices on the Taylor and Garretson mops. There was a mop manufactured in New England, at Winchenden, Massachusetts, called the Spring mop. It was not sold generally to the trade; it sold to peddlers. There was a mop manufactured at Lebanon, New Hampshire, but the sale is very limited; I do not know its name; only know it as the Lebanon mop. There has been quite a number of mops started and went out since I have been in the business, and never got into the general trade; there were wooden mops manufactured, but the sale is so very limited that we do not consider them in the market to any extent, so far as the East is concerned. (Fol. 219 and 221.)

380 Ques. How were the mops named in your last answer, so far as they had a market, sold, as compared with the Taylor and Garretson mops?

Ans. The Manchester mops sold generally about 25 to 50 cents per dozen less than the Taylor; it was so in regard to the Spring mop, so called. The Lebanon mop, as near as we could ascertain, was the same, about 25 to 50 cents less. The wood mop was generally sold in market at about six or seven dollars per gross, which would be 50 cents or upwards per dozen. (Fols. 222–3.)

Ques. How did the cost of making the mops you have named compare with the cost of manufacturing the Taylor and Garretson mops?

Ans. To the best of my ability to judge, I should judge that the Manchester mop would cost about the same as the Taylor or Garretson mop, and it would be my estimation that the Spring mop would cost about the same; the Lebanon mop, I should judge, would cost very near if not quite as much as the Taylor; the wood mop, I don't know as to the cost of that. (Fol. 224.)

Ques. Have you made an estimate of the cost of manufacturing the Garretson mop? If so, state the result of your estimate and the manner of arriving at it.

Ans. I know the cost of the Taylor mop; from the cost of the Taylor mop I estimate the cost of the Garretson mop, in my judgment, which I think would cost from five to six cents less than the Taylor, the Taylor mop costing us about 95 cents per dozen. (Fol. 225.)

Your petitioner further says that he testified as a witness in his own behalf, before the said master, that he had been a manufacturer of mops at Buffalo since the spring of 1869; that from the close of the year 1871 to March, 1874, the Taylor and Garretson mops were sold at a uniform price of about two dollars per dozen, and there was no mop in the market that had any considerable sale that he had to compete with; that
381 the substantial supply of the country was furnished by the Taylor and Garretson mops (fol. 52); that his improvement enabled him to make a mop that was light, compact, and easily adjusted to the mop-cloth and not liable to release it in use, and that these qualities were not substantially possessed by any mop other than his and Taylor's.

Ques. State fully what knowledge you have during the period named (since 1869) of other articles of mops being in the market than yours and the Taylor mops, and the character of the sales, if any, of other mops.

Ans. I have knowledge of most all the mops that were made and sold in the market during that period, as I visited the principal cities where mops were sold and saw the kinds of mops that were on sale.

There were a few wooden mops sold, and but few, as far as my observation went, and they were sold at very low prices; I think about fifty or sixty cents a dozen. There was another mop made, an iron mop, called the Manchester mop, which was sold to a limited extent and at low prices, about $1.50 per dozen or less; there were also a few made in Buffalo, also at that time or shortly before that time, that were not sold to any considerable extent.

This, I believe, is all that I now think of, without it was some that were made in New England that I scarce ever found in the market; I don't know the name of it. (Fol. 60–1.)

Your petitioner further testified that no appreciable amount of profit could have been made from the manufacture and sale of the wooden mops, and that the Manchester mop was heavier than the Garretson mop and required more cast-iron and wire to make it, and cost more than the Garretson mop to manufacture (fol. 65); that during the period covered by the defendants' account no other went into the general trade than the defendants' mops and the Taylor and Garretson mops (fol. 67); that
382 your petitioner submitted a statement of the actual cost of the production of the Garretson mop by him during the period covered by the defendants' account, showing the same to have been on a manufacture and sale of 3,842 dozens, at $8.94\frac{24}{100}$ per dozen (fol. 470), and that his average selling price during said period was $81.96\frac{1}{4}$. (Fol. 480.)

That at folios 170, 171, master's record, your petitioner gave a list of mops patented and unpatented that he had seen or heard of, of which there were samples in existence during the period of the defendants' account, but few of them on sale or in the market; and at folios 113, 114, 115, and 88 of the complainant's original record is a statement of mops referred to in the proofs which had become obsolete, and had ceased to be known to the market long prior to the period of the defendants' infringement.

For a further exhibit of the state of the proofs before said master in respect to the state of the mop market during the period of the defendants' infringement, and for a period long prior thereto, your petitioner cites pages 8 and 9 of the complainant's brief on the hearing of the exceptions to the master's report and the references made therein.

Your petitioner further says that none of the foregoing evidence given in his behalf before said master was in any manner contradicted on the part of the defendants, and the same stands undisputed in the case. That such evidence as was given by the defendants in regard to the sales of other mops in the market related to mops sold by themselves and others subsequent to the close of the period of their infringement and the service of the perpetual injunction made against them under the decree, and your petitioner submits that the condition of the mop market at a period subsequent to that of the defendants' accounting cannot be considered as
383 properly bearing upon the question involved in the case. That on the part of the defendants it appears that a patented implement known as the Seymour mop and brush-holder was introduced into the trade in the spring of 1875 (fol. 256, 172), and one of the defendants testified that on the 3d of August, 1875, the defendants obtained a patent for the mop presented in the proofs as Exhibit I, which, for the balance of the year, they sold at about the same rate as they had sold the infringing mops, at a cost of production somewhat cheaper. That at the first argument of the exceptions herein, before Judge Johnson, as a condition of the complainant having the benefit of Complainant's Exhibit No. 10, the extension of the Taylor patent, on the requirement of the defendants, the complainant put in evidence the mop marked "Exhibit X," accompanied by the statements and affidavit on file marked "Exhibits Y and Z," showing a sale by complainant of Exhibit X as a mop competitive to Exhibit I, from Feb. 28, 1876, to July 29, 1876, of a total of three hundred and seventy-two dozens, at an average price of $1.45 per dozen, against during the same period a sale by the complainant of the patented mop of eight hundred and fifteen dozens, at an average price of $1.75 per dozen.

Your petitioner therefore submits that during the period covered by the defendants' infringement, and for a long time prior thereto, as between the complainant's patented mop and the most favorable specimen of mop which the defendants would have been at that time at liberty to make and sell, and which they could have sold, even to the most limited extent, there existed a difference in profit of manufacture of not less than from twenty-five to fifty cents per dozen in favor of the patented article, as the result of the employment of the devices which the complainant's patents secured to him exclusively, and that the account of the defendants filed with
384 said master showed that the defendants had made and sold during the period of their infringement, from March 13th, 1874, to May 7th, 1875, 12,699½ dozens of mops containing the complainant's patented improvements; and the examination of the defendant John K. Clark in connection with such account, and the books and vouchers produced by him, showed that the defendants' actual profits from the manufacture and sale of the entire article was $8,848.68.

Your petitioner further says that he finds himself much aggrieved by that portion of the order above referred to which awards to the said defendants the costs of the reference before the master and of his report and of the exceptions to the master's report, and of the hearing thereon; and your petitioner submits that this portion of the said order is erroneous for the following reasons, namely:

That such award of costs to the defendants is inconsistent with the decree made and filed in the cause on the 11th day of May, 1875, in and by which it was adjudged that the complainant do recover of the defendants the profits made and received by the defendants, and the damages, if any, over and above the amount of such gains and profits suffered by the complainant by reason of the infringement and violation of the rights of the complainant which it is adjudged have been committed by the defendants, together with the costs of the complainant in this cause to be adjudged [adjusted]; and in and by said decree it was further ordered that the question of the amount of the complainant's costs be reserved until the coming in of the report of the said George J. Sicard, and that a final decree be had for the same, together with the profits and damages, &c.

Your petitioner further says that costs of the reference and proceedings before the master ought not to be awarded against him, for the reason that the allowance or disallowance of such costs should not be
385 made to depend on the amount of the complainant's recovery of damages, whether the same be actual or nominal.

Your petitioner further says that the evidence taken before the said master and on the original hearing fully showed that the defendants during the entire period of their infringement had full notice of the rights of the complainant under his letters of patent, and that their said infringement was persistent and intentional throughout the entire period of the same, and in support of this statement your petitioner refers to his own testimony given at folios 80, 81, 82, 83 of the master's record, and that the defendant, Charles B. Clark, testified on such original hearing that he was the same Charles B. Clark named as one of the patentees in the patent 54860, and which is one of the patents on which this suit is brought (def'ts' record, fol. 12); that the defendant John K. Clark admitted in his testimony before the said master that he had seen both the complain-

ant's patents as early as the winter of 1873–'4, or the spring of 1874 (master's record, fols. 414, 415, 416), and the defendant Edwin L. Ferguson admitted that as early as his first coming to Buffalo, in 1867, he had heard that the complainant had taken out patents on mops. (Master's record, fol. 445.)

Your petitioner further says that the main part of the infringement by the defendants for which the reference in this cause was ordered under the decree took place subsequent to an order which was made by the court on the 16th of June, 1874, Hon. Ward Hunt presiding, restraining and enjoining the said defendants from making, using, or selling the improvements secured to the complainant by his letters patent above referred to, unless within twenty days the said defendants should execute a bond, with sureties, in a penalty of five thousand dollars, as specified in said order, and should make and file a verified monthly account and statement
386 of their sales of mop-heads, with the prices charged by them, which bond was filed by them, and which monthly statement was rendered by them up to the time of the service, on or about the 14th day of May, 1875, of the peremptory injunction awarded by the decree in said cause; and that for a more full statement of the contents of the said last-mentioned order your petitioner begs leave to refer to the same, as the same appears on the files of this court in this cause.

Your petitioner further says that he has expended above three thousand dollars for the disbursements, counsel fees, and expenses of this cause; that the infringement on the part of the defendants is such, as he is advised by his counsel, as would subject them to an increase of the damages to be made by the court, under the provisions of sections 4919 and 4921 of the Revised Statutes, provided there was a recovery of actual damages in his favor, but that under the said order of July 15th your petitioner is not only deprived of any allowance of actual damages, but is made to bear in a large part the costs of the litigation on the part of the said defendants, who have been throughout willfully, and with premeditation, trespassers upon his exclusive privileges.

Wherefore your petitioner prays that your honor will be pleased to vouchsafe a rehearing of this cause before your honor; your petitioner submitting to pay such costs as the court shall award in case his complaint shall be found groundless.

And your petitioner will ever pray, etc.

OLIVER S. GARRETSON.

STATE OF NEW YORK,
Northern District of New York, ss:

On this 8th day of March, 1879, before me personally appeared the above-named Oliver S. Garretson and made oath that he had read
387 the foregoing petition subscribed by him and knows the contents thereof, and that the same is true, of his knowledge, except as to the matters which are therein stated on his information and belief, and as to those matters he believes it to be true.

[L. S.] JAMES C. STRONG,
U. S. C. C. Commissioner.

We certify that we have examined the case referred to in the foregoing

petition, and are of opinion that the order of July 15th, 1878, therein mentioned is erroneous in the particulars specified in said petition, and that the case is a proper one for rehearing.

ASHER P. NICHOLS.
H. C. TUCKER.
JAMES A. ALLEN.

United States circuit court for the northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK AND OTHERS. } In equity.

Please to take notice that upon the foregoing petition, together with the printed records of each of the parties in this cause, read at the hearing of said cause before Judge Woodruff, and the printed record of the testimony and proceedings before the master in said cause, and the order and papers referred to in the annexed petition, a motion will be made by the complainant in this cause at the adjourned term of this court to be held at the court-house, in the city of Utica, on the third Tuesday in
388 March, 1879, at the opening of the court on that day, or as soon thereafter as counsel can be heard, for a rehearing in said cause, and that the prayer of the said petition be granted; and for such other or further order as the court may grant.

Dated Buffalo, March 7th, 1879.

JAMES A. ALLEN,
Sol'r for Complainant, 284 Main Street, Buffalo, N. Y.

To F. A. MACOMBER, Esq.,
Sol'r for Defendants.

(Endorsed:) March 10, 1879.

389 At a special term of the circuit court of the United States of America for the northern district of New York, in the second circuit, on the third day of September, in the year of our Lord one thousand eight hundred and seventy-nine.

Present, the honorable Samuel Blatchford, circuit judge.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHARLES B. CLARK ET AL. DEFENDANT'. } In equity.

The petition of Oliver S. Garretson, the complainant in this cause, verified on the 8th day of March, 1879, for a rehearing of this cause upon the exceptions on the part of the complainant to the master's report therein, having been duly filed, and the motion on the part of the complainant based thereon having been brought on to be heard at the stated
390 term of this court, held at Canandaigua, in said district, on the 17th day of June, A. D. 1879, after hearing Mr. James A. Allen, of counsel for the complainant, in support of the motion, and Hon. F. A. Macomber, of counsel for the defendant, in opposition thereto, due consideration having been had, it is hereby ordered that the prayer of the said

petition for a rehearing be and the same is hereby in all things denied, with costs.

SAM'L BLATCHFORD.

(Endorsed:) Filed Aug. 4, 1880.

391 Circuit court of the United States for the northern district of New York.

OLIVER S. GARRETSON
vs.
CHARLES B. CLARK AND OTHERS.

BLATCHFORD, J.:

The rule laid down in the decision rendered in this case July 5th, 1878, was this: "The patentee must in every case give evidence tending to separate or apportion the defendants' profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible and not conjectural or speculative; or he must show by equally reliable and satisfactory evidence that the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature." I understand this rule to be the result of the authorities. The plaintiff does not controvert the rule, but insists that he has complied with it. The conclusion of the court
392 was this: "In the present case the master reports that the plaintiff has failed to give such evidence, and I concur with the master in his conclusion."

The plaintiff contends that the evidence before the master "furnishes a substantial compliance, according to the nature of the subject-matter, with the rule that the profits or damages deducible from the use of the patented features must be separated from the profits or damages upon the article as a gross product." He contends that such evidence made the separation referred to, because it showed on the one hand the profits which the plaintiff made in making and selling mops containing his patented features, and, on the other hand, the profits realized from the manufacture and sale of forms of mops on actual sale which did not embody the plaintiff's patented features. This is the same proposition which was considered and rejected by the master and the court. But the evidence referred to would be the proper evidence only in a case where the entire value of the whole machine as a marketable article is properly and legally attributable to the
393 patented features. In such a case as that the profits and damages are to be calculated on the whole machine. This is not such a case. The master says: "There has been no evidence before me that would warrant a finding that the whole success of the mops in question, either of the complainant's or the defendants' manufacture, was due to the peculiar construction described in the claims of the patents above referred to. Nor could I find from the evidence that that peculiar construction constituted the sole feature that made the mops a success in the market. Such finding would be required to sustain the complainant's theory of damages." The master was clearly correct in thus holding.

The plaintiff complains that the master's report contains only negations

and omits to affirm what specific line of proof on the part of the plaintiff should have been adopted properly to establish his damages. It was not the province of the master nor is it the province of the court to
394 suggest any specific line of proof either as proper or necessary. The burden is on the plaintiff to lay a basis by evidence for ascertaining the proper profits or damages. If he produces certain evidence and lays a certain basis, all that the master and the court are to do is to say whether he has made out his case or not. If he has not made out his case, that is all there is to be said. It cannot be said that there may not be many forms of evidence which would be satisfactory to show that a plaintiff is entitled to the profits on the whole machine. Their sufficiency is to be passed upon when they are presented. It is also contended that the court did not pass on the first five exceptions taken by the plaintiff. But I think it quite apparent that in passing on the sixth and seventh exceptions the court passed on the first five. The first claims that there was evidence of damages and profits, the second that it was error to award only nominal damages, the third that there was evidence of actual damages, the fourth that there should have been a report of an amount of
395 actual damages, the fifth that there should have been a report of an amount of actual profits.

I do not perceive that any of the considerations now presented on the part of the plaintiff were overlooked by the court in its former decision.

In the case of Herring v. Gage, in this court, decided by Judge Wallace, the master reported that the defendants, in milling, saved, by using the patented device, one barrel of flour in every 600 made, saving thus so many barrels, worth so much a barrel. He reported such saving as profits, and reported it as a saving made over and beyond the saving which the defendants could have made by the use of any other device. The plaintiff did not except and the defendants did except that such finding was not supported by the proof. The proof given by both sides was as to the additional saving made by the use of the patented device over what might have been made by the use of other devices for cooling and drying meal as a substitute for the patented device. Judge Wallace remarked that it appeared that the defendants had saved by the use of the pat-
396 ented device flour which until they used that device had been lost and, in commenting on the rule laid down in Mowry v. Whitney (14 Wallace, 651), he said that that was a case where the entire profits of the manufacture had been given by the master, when such profit was largely due not to the patented invention but to other processes actually used by the defendant, and that the rule so laid down did not apply where the profits had been made directly by the use of the patented device. This case is like Mowry v. Whitney, and is not like Herring v. Gage. There is nothing in the decision in the latter case that is inconsistent with the rulings in the former decision in the present case. A plaintiff is required to separate between the patented part of what the defendant makes and sells and the unpatented parts, and not between such patented part and something which the defendant does not embody in his machine. The distinction is a plain one.

In its former decision this court directed that the plaintiff have the costs of the suit, except the costs of the reference before the master and
397 of his report, and of the exceptions, and of the hearing thereon, and that the defendants have the costs of such reference and report

and exceptions and hearing. The plaintiff alleges that the interlocutory decree provided that the plaintiff recover of the defendants the "the costs of the complainant in this cause, to be adjusted." But it further provided that the question of the amount of such costs be reserved until the coming in of the master's report, and that a final decree be had for the same, together with the profits and damages which shall be finally adjudged to be payable to the plaintiff. It also awarded a perpetual injunction to the plaintiff. In view of the award to the plaintiff of nothing but nominal damages and of no profits, it is not proper that the plaintiff should have any costs except those to and including the interlocutory decree, and that the defendants should have the costs of the subsequent proceedings. There is nothing in this that is inconsistent with the interlocutory decree.

The prayer of the petition for a rehearing is denied, with costs.

398 James A. Allen for the plaintiff.
F. A. Macomber for the defendants.

(Indorsed:) Circuit court of the United States for the northern district of New York. Oliver S. Garretson vs. Charles B. Clark and others. (Copy.) Decision. Sept. 3d, 1879. (Orig.) Filed Sept. 3, 1879.

399 Circuit court of the United States for the northern district of New York.

OLIVER S. GARRETSON, COMPLAINANT,
vs.
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. Ferguson and Henry R. Clark, defendants. } In equity.

To the honorable the Supreme Court of the United States.

The appeal of Oliver S. Garretson, the above-named complainant and appellant, respectfully showeth:

That upon the 8th day of May, A. D. 1874, the above-named complainant filed his bill in the circuit court of the United States for the northern district of New York in the second circuit against the above-named defendants and appellees, alleging that the said complainant and Charles B. Clark, one of the said defendants, were the joint original inventors of a certain improved mop-head not known or used by others before their invention thereof, and which was patented to them by letters patent of the United States, bearing date May 22d, 1866, and numbered 54860, and thereby the exclusive right was secured to such patentees of making, using, and vending such improved mop-head for the term of seventeen years from the date thereof, and that on or prior to the 11th day of November, 1871, and at all times thereafter, the said complainant was duly vested by assignments duly made and recorded with the full and exclusive
400 title to the said letters patent; that the complainant was also the inventor of an improved mop-head for which letters patent of the United States were issued to him bearing date August 13th, 1867, numbered 67643, whereby was granted to him the exclusive right to make, use, and vend such improved mop-head for the term of seventeen years; that the defendants were engaged in manufacturing, selling, and using mop-heads constructed in accordance with and containing the inventions described in and secured by said several letters patent in violation and in-

fringement of the rights of the complainant, and refusing to account to the complainant for any part of the defendants' profits thereby; wherefore the complainant prayed that the defendants should be decreed to account with him, and pay over to him the profits which they had realized from their unlawful manufacture, sale, and use of said patented inventions and all such gains and profits as the complainant would have realized but for such unlawful acts and doings of the defendants, and all damages which the complainant had sustained by reason of the same, as well as for writs of injunction, provisional and perpetual, restraining the defendants from making, using, or selling mop-heads embracing the said patented inventions.

That a writ of subpœna having been duly issued out of the said circuit court pursuant to the prayer of the bill of complaint, of which service was made upon the defendants, the defendants appeared therein, by F. A. Macomber, esq., their solicitor, and filed an answer wherein they admitted the issuing of the several letters patent set forth in the bill,
401 denied infringement, alleged that the complainant and Charles B. Clark were not joint inventors of the improvements described and claimed in letters patent No. 54860, but, if inventors at all, were separate inventors each of a distinct and independent part of the machine described, and that thereby such letters patent were null and void; that the patentees were not original or first inventors of any material and substantial part of the principle and combination patented in and by the first claim of letters patent No. 54860, but that substantially the same thing had been previously known to Solyman Merrick and Albert D. Briggs, residing at Springfield, Mass., to W. C. Bemis, Amos Call, and others, members of the Bemiss and Call Hadware and Tool Company of said Springfield, to A. W. Plark and Byron Boardman, of Norwich, Ct., to James Sangster, Wm. H. Kirkholder, and John H. Husted, of Buffalo, and to James A. Taylor, of East Hamburg, N. Y.; and that the same were described and shown in letters patent of the United States, No. 23751, to Albert D. Briggs; letters patent No. 5707, to Solyman Merrick; letters patent, No. 58342, to R. H. Gray and S. Abrams; letters patent, No. 48027, to A. W. Park and C. J. Winters; letters patent, No. 56166, to Byron Boardman; letters patent, granted Aug. 17, 1835, and reissued May 17th, 1842, to Solyman Merrick; letters patent, No. 10237, to T. Randlett; letters patent, No. 50137, to Corydon Karr, reissued; letters patent, No. 3682, to Luke Tayler; letters patent, No. 64683, to Mason and Messinger; letters patent, No. 47642, to Nelson Homes; and also in English letters patent, No. 45, dated Oct. 1, 1852, granted to Charles W. Rowley Richards; also
402 in a printed publication entitled Technologische Encyklopedie, by John Jos. Prechtel, published at Stuttgart, Germany; also in the Sehrbuch der Ingenieur und Maschinen Mechanik, by Dr. Julius Weisbach, published at Braunschweig, and in the Encyklopædisches Handbuch des Maschinen und Fabrikwesens, &c., by Carl Hartman, published at Leipzig and Darmstadt, Germany; and that certain of the foregoing patents and publications also described the same patented matter or thing described and claimed in the said letters patent issued to the complainant and numbered 67643.

Replication to the answer of the defendants having been duly filed on the part of the complainant and the proofs of both parties taken, the cause

came on to be heard on pleadings and proofs at the January term of said circuit court for the northern district of New York, sitting at Albany, in the year 1875, Justice Woodruff presiding; where, after argument by the counsel for the respective parties, it was determined by the court that the patents whereon this suit is founded are valid patents and owned by the complainant as alleged in the bill, not anticipated by any of the devices set up by the defendants as showing want of novelty, or as showing that the patentees were not the first inventors; that Clark and Garretson were the joint inventors of the combination of devices in the patent granted to them numbered 54860, bearing date May 22, 1866, that the defendants' mop-heads, which it was admitted they manufacture, do infringe the first claim of said letters patent of May 22, 1866, and the whole claim of the letters patent No. 67645, dated August 13, 1867.

403 Whereupon it was decreed by the court that the complainant recover of the defendants the profits made and received by the defendants, and the damages, if any, over and beyond the amount of such gains and profits suffered by the complainant by reason of the infringement and violation of the rights of the complainant which it is adjudged have been committed by the defendants, together with the costs of the complainant in the cause; and it was referred to a master of the court, pro hac vice, to take proofs of and to compute the amount of the said profits and damages and report the same to the court, with an award of a perpetual injunction against the defendants, restraining them from further making or selling mop-heads, pursuant to the prayer of the bill of complaint.

That, pursuant to the reference made by such decree, on final hearing, the matter of the assessment of said damages and profits was brought on before the said master, and proofs were taken and submitted on the part and behalf of each of the parties, inclusive of statements by the defendants on oath of the amount of their sales of the mop-heads referred to in the decree for the period embraced in the decree, and extending down to the time of the service of the injunction, to wit, May 14, 1875, the prices and terms of sale, the net amount received by them, and cost of production thereof; and the testimony of various witnesses was taken in the premises, with sundry exhibits and other evidence; and that thereafter, and on or about the 13th day of May, 1876, the said master made and filed his report, wherein and whereby he found and reported that he had been attended by the parties complainant and defendants, and by

404 their counsel, and that he had taken the proofs offered before him, and that such proofs, with the exhibits produced before him, were transmitted with his report to the court, and that the complainant in the case had not offered before him evidence of the damages suffered by him or of the profits realized by the defendants by reason of the infringement and violation by the defendants of the rights of the complainant in the invention and improvement referred to in the decree, and that the complainant was entitled under said decree to nominal damages only against said defendants. Whereupon, and on or about the 7th day of June, A. D. 1876, the said complainant duly excepted to the said report of the said master and finding of nominal damages only on the grounds, among others, that the said master ought to have certified that the complainant was entitled under said decree and the proofs before said master to actual damages, and

ought to have assessed in favor of the complainant the amount thereof and reported the same; that the said master ought to have certified that the complainant had offered before said master evidence of damages suffered by him, as well as of the profits realized by the defendants by reason of the infringement and violation by the defendants of the rights of the complainant in the inventions and improvements referred to; and that the said master had in and by his report omitted and refused to assess and compute in favor of the complainant, as directed by said decree, the amount shown by the proofs before said master of actual profits made and received by the defendants by reason of the infringement and violation of
405 the rights of the complainant adjudged by the said decree to have been committed.

That the said complainant, on or about the said 7th day of June, 1876, duly filed his said exceptions with the clerk of said court, and that the same were subsequently brought on to be heard at a term of the said circuit court held in the village of Canandaigua, in and for said northern district of New York, on or about the 18th day of June, A. D. 1878, Justice Blatchford presiding, whereat, after argument on the part of the respective parties, a direction was made by the court that the said report of the said master be confirmed, notwithstanding the said exceptions of the said complainant, and that all and singular the said exceptions be overruled; and an order was entered directing that a decree be entered in accordance with the master's report, and awarding against the said complainant the costs of the reference before the said master, and of his report, and of the exceptions and of the hearing thereon.

That thereafter, and before the entry or recording of the final decree of the court in said cause, and on or about the 10th day of March, A. D. 1879, the said complainant duly filed with the said clerk his petition for a rehearing upon the said exceptions to said master's report, setting forth at large therein grounds of alleged error in the determination by the court upon the said exceptions and costs thereof and of the proceedings before the said master; and service of the said petition, with notice of hearing thereupon, was duly made upon the solicitor in said cause for said defendants, and said petition and motion for rehearing were brought on to be heard at a term of said court held at the village of Canandaigua,
406 in said district, on the 17th day of June, A. D. 1879, at which time and place, the counsel for the respective parties being heard, the motion of the said complainant for a rehearing in said cause was denied, and an order accordingly was entered with the said clerk on or about the 3d day of September, A. D. 1879.

That subsequently the costs of the said cause in favor of the said complainant having been taxed at the sum of $209.19 and those of the said defendants at the sum of $198.40, at an adjourned term of the said court held at the city of Utica, in said district, on the 16th day of March, A. D. 1880, the final decree of the said court in the said cause was made and entered, wherein and whereby it was ordered, adjudged, and decreed by the said circuit court that the said report of the said master hereinbefore referred to be, and the same was thereby, in all things ratified and confirmed, notwithstanding the said exceptions of the said complainant, and each and every of the same; and in and by the said final decree it was further ordered, adjudged, and decreed by the said court that the said defendants

above-named pay to the said complainant for the damages suffered by him and the profits realized by the said defendants by reason of the infringement and violation by the defendants of the rights of the complainant the sum of six cents only; and in and by the said final decree it was further ordered, adjudged, and decreed by the court that the said defendants also pay to the said complainant his costs of this suit prior to the proceedings before said master, taxed at two hundred and nine $\frac{19}{100}$ dollars, and
407 that the said complainant pay to the said defendants their costs of the reference before the said master, and of his report, and of the exceptions and of the hearing thereon, taxed, at the sum of $198.40; and that the complainant have execution against the said defendants for the excess in his favor amounting to the sum of $10.79; and in and by the said final decree it was further ordered, adjudged, and decreed that a perpetual injunction issue in the cause restraining the defendants from making, using, or selling mop-heads or mops embodying the inventions described in the complainant's said letters patent, Nos. 54860 and 67643, or either of the same.

Wherefore this appellant appeals from the whole of said final decree of said circuit court of the United States excepting the portion thereof awarding an injunction in favor of said complainant, and respectfully prays that the decree of said circuit court and the bill, answer, pleadings, depositions, evidence, and proceedings in the said cause may be sent to the Supreme Court of the United States without delay; and that the said Supreme Court will proceed to hear the said cause anew, and that the said final decree of the circuit court and every part thereof, excepting that containing an award of an injunction in favor of the complainant, may be reversed, and that the appellees may be adjudged to pay to the appellant the actual profits received by the defendants by reason of their aforesaid adjudged infringements, together with the actual damages of the complainant to be
408 found by the said Supreme Court from the evidence, or that the Supreme Court may direct such decree to be rendered or such further proceedings to be had by the said circuit court as the justice of the case may require, and that the appellees may be decreed to pay to the appellant his proper costs as well of the said circuit court as of the Supreme Court.

Dated Aug. 13, 1880.

JAMES A. ALLEN,
Solicitor and of Counsel for Appellant.

The foregoing appeal is allowed.
August 17th, 1880.

SAM BLATCHFORD,
Circuit Judge.

409 (Indorsed:) 1453. United States circuit court, northern district of New York. In equity. Oliver S. Garretson, complainant, *vs.* Charles B. Clark and others, defendants. Appeal to Supreme Court of the United States from final decree. James A. Allen, sol'r for appellant, 1 Weed's Block, Buffalo, N. Y. U. S. circuit court, N. D. of N. Y. Fled Sep. 1st, 1880. William H. Bright, clerk.

410 Know all men by these presents that we, Oliver S. Garretson, manufacturer, of the city of Buffalo, in the county of Erie and State of New York, and Adam Reid, merchant, of the same place, are

held and firmly bound unto Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry B. Clark in the full and just sum of five hundred dollars to be paid to the said Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry B. Clark, their certain attorneys, executors, administrators, or assigns, to which payment, well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly and severally, firmly by these presents. Sealed with our seals and dated this 12th day of August, in the year of our Lord one thousand eight hundred and eighty.

Whereas the above-bounden Oliver S. Garretson has appealed to the Supreme Court of the United States from a final decree of the circuit court of the United States for the northern district of New York,
411 bearing date the 16th day of March, A. D. 1880, in a cause in which the said Oliver L. Garretson was complainant and the said Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark were defendants:

Now, the condition of the above obligation is such that if the said Oliver S. Garretson shall prosecute his appeal to effect and answer all costs, if he fail to make his plea good, then the above obligation to be void; else to remain in full force and virtue.

OLIVER S. GARRETSON. [SEAL.]
ADAM REID. [SEAL.]

Sealed and delivered in presence of—
JAMES MURPHY.

STATE OF NEW YORK,
County of Erie, City of Buffalo, ss:

On this 12th day of August, 1880, before me personally came Oliver S. Garretson and Adam Reid, to me known to be the same persons described in and who executed the foregoing bond, and each for him-
412 self severally acknowledged that he had executed the same.

[L. S.] JAMES MURPHY,
Notary Public.

STATE OF NEW YORK,
County of Erie, ss:

Oliver S. Garretson and Adam Reid being severally duly sworn, each for himself deposes and says that he is a resident and householder in and of the city of Buffalo, in the State of New York, and is worth the sum of one thousand dollars over and above all debts and liabilities which he owes or has incurred, and exclusive of property exempt from execution.

OLIVER S. GARRETSON.
ADAM REID.

Subscribed and sworn to before me this 12th day of August, A. D. 1880.

[L. S.] JAMES MURPHY,
Notary Public.

Approved by—

SAM'L BLATCHFORD,
Circuit Judge.

AUGUST 17TH, 1880.

413 (Endorsed:) No. 1453. United States circuit court, north. dist. of New York. In equity. Oliver S. Garretson, complainant, vs. Charles B. Clark and others, defendants. Bond on appeal to Supreme Court of the United States. James A. Allen, sol'r for appellant, 1 Weed's Block, Buffalo, N. Y. Filed Sept. 1, 1808.

414 *Citation.*

By the honorable Samuel Blatchford, one of the judges of the circuit court of the United States for the northern district of New York, to Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark.

Whereas Oliver S. Garretson has lately appealed to the Supreme Court of the United States from a final decree lately rendered in the circuit court of the United States for the northern district of New York, made in favor of you, the said Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, and has filed the security required by law:

You are therefore cited to appear before the Supreme Court, at the city of Washington, on the second Monday of October next, to do and receive what may appertain to justice to be done in the premises.

Given under my hand at the city of Utica in the said northern district of New York, in the second circuit, the 17th day of August, in the year of our Lord one thousand eight hundred and eighty.

SAM'L BLATCHFORD,
Circuit Judge.

415 UNITED STATES OF AMERICA,
Second Circuit, Northern District of New York,
County of Erie, City of Buffalo:

James Murphy, sworn, says that he is 21 years of age and upwards, & a resident of said city, and an attorney of the supreme court of the State of New York; that at said city, on the 31st day of August, 1880, he served the foregoing citation on John K. Clark, Edwin L. Ferguson, & Henry R. Clark by delivering to and leaving with each of them a copy thereof, and at the same time exhibiting to each the original and the signature of the circuit judge thereon; and that he knew each of the persons so served to be the persons mentioned in said citation to be served.

JAMES MURPHY.

Subscribed and sworn before me this 31st day of August, 1880.
[NOTARIAL SEAL.] EDWARD WILHELM,
Notary Public, Erie Co., N. Y.

416 (Indorsed:) 1453. United States circuit court northern district of New York. In equity. Oliver S. Garretson, complainant, vs. Charles B. Clark and others, defendants. Citation on appeal to the Supreme Court of the United States. James A. Allen, sol'r for appellant. 1 Weed's Block, Buffalo, N. Y. U. S. circuit court, N. D. of N. Y. Filed Sep. 1, 1880. William H. Bright, clerk.

417 UNITED STATES OF AMERICA,
Northern District of New York, ss:

I, William H. Bright, clerk of the circuit court of the United States of America for the northern district of New York, do hereby certify that the

foregoing pages, numbered from one to four hundred and sixty-six inclusive, contain a true and complete transcript of the record and proceedings had in said court in the suit of Oliver S. Garretson vs. Charles B. Clark, John K. Clark, Edwin L. Ferguson, and Henry R. Clark, as the same remain of record and on file in said office, except Complainant's Exhibit 9 and an exhibit marked "A" by the master, which are copies from books of account.

In testimony whereof I have caused the seal of said court to be hereunto affixed, at the city of Utica, in said northern district of New York, this eighth day of November, in the year of our Lord one thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fifth.

[SEAL.] W. H. BRIGHT, *Clerk.*

(Indorsement on cover:) No. 201. Oliver S. Garretson, appellant, vs. Charles B. Clark, John K. Clark, Edwin L. Ferguson, & Henry R. Clark. N. New York C. C. U. S. Filed 13th November, 1880.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

No. 201.

OLIVER S. GARRETSON, APPELLANT,

vs.

CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON AND HENRY R. CLARK, APPELLEES.

BRIEF OF APPELLANT.

JAMES A. ALLEN OF COUNSEL FOR APPELLANT.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

OLIVER S. GARRETSON,
Appellant,
versus
CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. Ferguson, and Henry R. Clark,
Appellees.

No. 201.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF NEW YORK.

STATEMENT.

The bill of complaint in this cause, filed May 3, 1874, alleges that letters patent of the United States, dated the twenty-second day of May, A. D., 1866, numbered 54860, were issued and granted to the plaintiff and Charles B. Clark, one of the defendants, for an improved mop-head, of which they were joint inventors; that on or about the seventeenth day of February, 1869, said Charles B. Clark, by an assignment in writing, transferred to one John D. Shepard all of his title and interest in and to such letters patent, which assignment was duly recorded; and that on or before the eleventh day of November, 1871, Shepard, by an assignment in writing, also duly recorded, sold and transferred all his title and interest in the patent and invention to the plaintiff. That on the thirteenth day of August, 1867, other letters patent of the United States, numbered 67643, were issued and granted to the plaintiff for an improved mop head, of which he was the inventor. The bill charged the defendant with manufacturing and selling without license of the plaintiff, machines, or articles containing the inventions described in and secured by the several letters patent. The bill contained the usual prayer for an injunction, and that the defendants be decreed to account with and pay over to the plaintiff the profits which the defendants have realized from the unlawful manufacture, sale and use of the patented inventions, and all such gains and profits as the plaintiff would have received but for the unlawful acts of the defendants, together with all such damages as the plaintiff has sustained by reason of such unlawful acts and doings.

The defendants filed a joint and several answer admitting that letters patent No. 54860 were granted on the twenty-second day of May, 1866, to the said Charles B. Clark and the plaintiff jointly, and that Charles B. Clark afterwards sold and transferred his interest in said patent to John D. Shepard (fol. 15); and that an interest therein was assigned to the plaintiff (fol. 23); also, admitting the granting of letters patent No. 67643 dated August 13, 1867, to the plaintiff for an alleged improved mop head. The answer denies that the plaintiff and Charles B. Clark were joint inventors of the improvement described in letters patent No. 54860, avers that such improvement was, previously to the said supposed invention thereof, known to divers individuals whose names are given, and was also described and shown in various letters patent of the United States, and in certain printed publications duly specified and set forth. (Fols. 19. 20). And similar averments are also made respecting letters patent No. 67643 (fol. 21). The answer avers that the mop heads made and sold by the defendants were not constructed in the manner described and claimed in the letters patent set forth in the bill, but were made in accordance with, and under the authority of some or all of the following letters patent, viz: No. 82383, dated September 22, 1868, granted to Charles B. Clark and E. L. Ferguson; No. 128711, dated July 9, 1872, granted to Charles B. Clark; No. 145397, dated December 9, 1873, granted to Charles B. Clark. There was the usual formal replication. The cause was brought to a hearing on pleadings and proofs at the term of the circuit court held in January, 1875, before Woodruff, circuit judge, who found and decided that the patents set forth in the bill were valid patents, not anticipated by any of the devices set up by the defendants as showing want of novelty, or as showing that the patentees were not first inventors; that Clark and Garretson were joint inventors of the improvement described and claimed in letters No. 54860, and that the plaintiff was the owner and holder thereof by assignment as alleged in the bill, and the mop heads which it was admitted that the defendants manufactured infringe the first claim of the letters patent No. 54860, dated May 22, 1866, and the whole claim of the letters patent No. 67643, dated August 13, 1867. The decree of the circuit court awarded an injunction, and adjudged that the plaintiff recover of the defendants the profits made and received by them and the damages, if any, over and beyond the amount of such gains and profits suffered by the plaintiff by reason of the infringement and violation of the rights of the plaintiff which it was adjudged had been committed by the defendants, together with the costs of the plaintiff in the cause to be adjusted, and directed a reference to a master to take proofs of, and compute the amount of said profits and damages, and report the same to the court, (fols. 26-27). It was further ordered that the amount of the plaintiff's costs be reserved until the coming in of the master's report, and that a final decree be had for the same, together with the profits and damages which should be finally adjudged payable to the plaintiff. (Fol. 25.) The reference was executed before the master, in December, 1875, and in January and February, 1876, and his report thereupon was filed on the seventeenth day of May, 1876, (fol. 30). By direction of the master,

the defendants filed with him an account marked "Exhibit A," showing the amount of their sales of the mop heads referred to in the decree, the date of each shipment of goods sold, the name and place of business of the purchaser, the number of dozens, the terms of sale, and the net amount received by the defendants on each sale. The number of dozens sold by them was 12699½. The gross amount received from sales was $23,211.87; net amount, $22,278.94; average price per dozen, $1.82⁸⁸⁸; net receipts per dozen, $1.75⁸⁸⁸; period of infringement, March 13, 1874, to March 7, 1875. (Fols. 320, 325, 201.)

The plaintiff's proofs before the master consisted in brief of evidence showing in detail the cost to the plaintiff of manufacturing and selling in the market the mops which he sold containing his patented improvements (fol. 216-217); the price which he obtained for the same during the period of the infringement and previously (fol. 211); that the plaintiff had full facilities to manufacture and sell all the mops made and sold by the defendants (fol. 211); that the sales made by the defendants were substantially made to persons who had been previous customers of the plaintiff (fol. 208, 209, 210); that during the period of the infringement the general market in iron mops for the country at large was substantially held by the plaintiff for his patented mops, and by the firm of Smith Mason & Company, of Chicago, Illinois, and Springfield, Mass., manufacturers of what was known as the Taylor mop, an article made under Letters Patent which did not expire until September 15th, 1880 (fol. 338). The plaintiff and Smith Mason & Company, had made an agreement as to the prices at which their respective mops should be sold, by reason of which they were not in competition, and the mops of both houses were sold at a uniform price of $2.00 per dozen. (Fol. 213.) A full account was given in the evidence respecting all mops which had been previously in the trade, with the result that at the time of the infringement they were out of market, having ceased to be any longer manufactured and put on sale, (fols. 212, 253,) and the only specimens which, in any sense, still continued to be in market were two or three inferior forms of mops known as the Lebanon, the Spring and the Manchester mops, which obtained merely a local and very limited sale that did not interfere at all with the plaintiff and the owners of the Taylor mop effecting their sales and maintaining their established prices. (Fols. 215, 216, 54, 55, 253, 254, 255.)

Prior to November, 1871, the plaintiff and Smith Mason & Company, in the manufacture and sale of their rival mops had been in active competition with each other (fols. 258, 259), and in litigation with regard to their respective patents. But the different inventions of Taylor and Garretson were held by the court distinct and several, neither one infringing upon the other. (Taylor vs. Garretson, 5 Fisher P. C. 116.) Between these two articles there was a difference in cost of manufacture of about six cents per dozen, in favor of Garretson.

In other respects they stood on nearly an equal footing, Garretson's being rather the lighter and more compact mop (fol. 256), the preponderance of trade inclining with the Taylor. The proofs showed that these two forms had superseded the earlier and less simple and serviceable varieties which had been previously sold, and that in all

substantial respects they had obtained a monopoly of the general market, nothing else in the same line being made that affected their prices or interfered with their sales. (Fols. 215, 253.)

The master in and by his report found and reported that the plaintiff had not offered before him evidence of the damages suffered by him or of profits realized by the defendants by reason of the infringement and violation by the defendants of the rights of the plaintiff in the invention and improvement referred to in the decree, and that he therefore reported that the plaintiff was entitled under said decree to nominal damages only (fol. 30).

Exceptions to the master's report having been filed on the part of the plaintiff, the same were brought on to be heard before Johnson, Circuit Judge, at the term of the Circuit Court for June, 1876, but they were not decided by said judge in his lifetime. At the term of the same court for June, 1878, argument of the exceptions was again had before Justice Blatchford, then Circuit Judge, who overruled all and singular the plaintiff's exceptions, and ordered a final decree to be entered awarding the plaintiff nominal damages only. Counsel for the plaintiff deeming that even under the law of damages and profits laid down by the court as applicable to the case, the facts contained in the evidence had not been fully considered by the court, caused a petition to be filed on or about the tenth day of March, 1879, for a re-hearing of the cause (fols. 375-387), which after argument had at the term for June, 1879, was denied (fol. 390).

A final decree having been entered whereby each and every of the plaintiff's exceptions was overruled, and in all things confirming the master's report, and awarding to the plaintiff for profits and damages in the cause the sum of six cents only, and to the defendants the costs of the proceedings on the reference, amounting to the sum of $198.40, (fols. 40, 41, 42,) the plaintiff thereupon on the thirteenth day of August, 1880, appealed to this court from such final decree of the Circuit Court and every part thereof, excepting so much as contains an award of an injunction in favor of the plaintiff, to the end that the same may be reversed, and that the appellees may be adjudged to pay to the appellant the actual profits received by the defendants on account of their infringement, together with the actual damages of the plaintiff established by the evidence, with full costs of the Circuit Court and of this court.

ASSIGNMENT OF ERRORS.

FIRST.

The court below erred in overruling the plaintiff's sixth exception to the master's report, for that the said master in and by his said

report had omitted and refused to certify to the court that the actual damages sustained by the plaintiff to be assessed under the decree for each and every dozen of the mops manufactured and sold by the defendants in infringement of the plaintiff's rights, which the plaintiff would have manufactured and sold but for such infringing manufacture and sale by the defendants, were and are the difference between what the manufacture and sale per dozen of such mops would have cost the plaintiff according to complainant's Exhibit No. 2 and complainant's Exhibit No. 3, or one of them, and the price at which the said plaintiff would have sold the said mops per dozen; and that the aggregate of such damages was and is the said difference multiplied by the number of dozens of such mops manufactured and sold by the defendants, which the complainant but for such infringement would have manufactured and sold; and the court below also erred in overruling the plaintiff's twentieth exception to said master's report, for that said master had admitted evidence on the part of the plaintiff establishing the lawful measure of damages in his favor and overruled the defendants' objections thereto, whilst at the same time the said master, in his report, had refused to consider and give effect to the said evidence so received and admitted and ruled by him to be competent and admissable, for the purpose of establishing such damages.

SECOND.

The court below erred in overruling the plaintiff's seventh exception to the master's report, for that the said master in and by his report had omitted and refused to certify to the court that the amount of the profits made and received by the defendants by reason of the infringement and violation of the rights of the plaintiff, adjudged by the said decree to have been committed by the said defendants, were and are for each and every dozen of the infringing mops made and sold by the defendants, the difference between what the manufacture and sale per dozen of the infringing mops manufactured and sold by the defendants cost to the said defendants, according to defendants Exhibit E, as surcharged and rectified by the other proofs in the case, and what the said infringing mops sold for per dozen, according to defendants' Exhibit A, and that the aggregate of such profits was and is said difference per dozen multiplied by the whole number of dozens of mops shown by said Exhibit A to have been made and sold by said defendants in infringement, as aforesaid, viz., 12,699½ dozens; and that the court below also erred in overruling the plaintiff's twenty-first exception to said master's report, for that the said master had admitted evidence establishing the amount of the profits made and received by the defendants by reason of their infringements and had held such evidence to be competent and admissable, whilst at the same time in his said report the said master refused to consider and give effect in and by his findings to the said evidence so received and admitted by him.

THIRD.

The court below erred in sustaining the master's report granting the plaintiff nominal damages only and in overruling the plaintiff's exceptions numbered first, second, third, fourth and fifth to such report, on the ground that actual damages or actual profits should have been assessed and awarded in his favor.

FOURTH.

The court below erred in overruling the plaintiff's exceptions to the master's report numbered eighth, tenth, twelfth, thirteenth, and fifteenth, founded on refusals of the said master to exclude evidence received by him relating to mops and combined mop-and-brush holders on sale at a time subsequent to the period of the defendants' infringement.

FIFTH.

The court below erred in adjudging that the plaintiff pay to the defendant costs of the reference before the master, and of his report and of the exceptions and of the hearing thereon taxed at the sum of $198.40.

ARGUMENT.

FIRST.

DAMAGES.

The court below erred in overruling the plaintiff's sixth exception to the master's report, for that the said master had omitted and refused to certify to the court that the actual damages sustained by the plaintiff, to be assessed under the decree, for each and every dozen of the mops manufactured and sold by the defendants in infringement of the plaintiff's rights, which the plaintiff would have manufactured and sold but for such infringing manufacture by the defendants, were and are the difference between what the manufacture and sale per dozen of such

mops would have cost the plaintiff, according to complainant's Exhibit No. 2 and complainant's Exhibit No. 3, or one of them, and the price at which the said plaintiff would have sold the said mops per dozen; and that the aggregate of such damages was and is the said difference multiplied by the number of dozens of such mops manufactured and sold by the defendants, which the plaintiff, but for such infringement, would have manufactured and sold.

And the court below also erred in overruling the plaintiff's twentieth exception to said master's report, for that the said master had admitted evidence on the part of the plaintiff establishing the lawful measure of damages in his favor and overruled the defendants' objections thereto, whilst at the same time the said master in his report had refused to consider and give effect to the said evidence so received and admitted and ruled by him to be competent and admissable for the purpose of establishing such damages.

(*a*) The earlier and main patent of the plaintiff is in substance for the combination of the threaded shank carrying the fixed jaw of the mop, with the collar carrying the movable jaw and the nut by which movement of the latter jaw is operated. The claim is not limited to the particular form of connection shown between the nut and collar. As the specification states: "The lugs *g g* may be placed on the nut, and the flange *h* on the collar with the same effect; or a greater number of lugs than two may be employed if desired, or an annular flange on the collar may be extended over and around the flange of the nut; or the nut elongated to extend through the collar, and the two secured together by any ordinary means known to mechanics; all of which would be equivalent both in effect and construction, provided they accomplish the one end essential to the operation of this invention, viz.: the connecting of the collar and nut together, so that the latter revolves freely, but both advance and recede as one."

The substantial thing patented in the mop is the principle of movement and operation, as applicable to such an instrument, by which the collar and movable jaw are moved in either direction, forward or backward, the nut connection causing the jaws to be held firmly and in a fixed position with reference to each other at any point within the limit of the play which is allowed to the traversing parts.

It will be seen that the mode of operation which is described and claimed in this patent distinctively characterizes the whole mop. The article in use has but a single function, viz.: to compress and retain the mop cloth and at the will of the operator to release it from position between the clamping jaws. As testified by the plaintiff, his improvement enabled him "to make a mop that was light, compact and easily adjusted to the mop cloth and not liable to release it in use." (Fol. 214.)

The features of the patentee's combination in a mop addressed themselves directly to the user of the article, commending it in degree ac-

cording to what view the customer took of the value of the operating mechanism as compared with those exhibited in other varieties of mops. If this mop was purchased in any given case it may be assumed to have been because of the preference awarded by the purchaser to the appliance of means by which this implement performed its office of clamping the cloth and, at will, of releasing it. The mode of operation embraced by the patentee's combination did not constitute a subordinate feature in the mop, but a distinctive and principal one. The plaintiff had an established trade in his patented mop. He says: "My trade at that time (when the infringement began) was established and did not require any special effort on my part to take orders, as I was well known as a manufacturer of mop heads. My mop being known throughout the country, the price being established, the dealers in mop heads usually sent their orders direct to me without solicitation." (Fol. 211.)

It is a necessary inference from this statement that the distinctive features of the plaintiff's article, as manufactured by him, constituted their own recommendation in the market. The trade was not a forced trade, but one springing from knowledge on the part of buyers of the merits of the article of which they were in want and in which they undertook to have dealings.

(*b*) The idea that in a case where the function of a machine is single and the patented combination supplies the characteristic trait of the operation of the machine, qualifying the mode of its use; where so soon as the elements that enter into and form the patented combination are left out of the machine the implement itself will cease to exist; the patentee should be called upon to draw what, in most cases, must needs be a purely theoretical line of separation in the article between so much of it as may be aid to constitute the patented feature, and whatever else is in the article as a whole appertaining to it as an article, is a metaphysical and destructive refinement, finding no countenance in the decisions of this court, ordinarily incapable of practical application in such a case as the one supposed, and to be insisted on with no other purpose or object in view than the abrogation in the particular case of the rights which the patent has lawfully vested and granted. This highly original conception, for its sinister and astute repugnancy to the reason and equity of the law, is in itself worthy of a patent, which, with accurate regard for truth should be entitled: "a new and ingenious discovery for the more effectual defeating the ends of justice in patent cases." In such a case as the one at bar, whoever takes from the patentee his combination of parts for operating the implement and puts upon the market an article embodying the same distinctive features, takes from him his article as a unit and should respond in damages or profits as for the taking of the article. As was well said *arguendo* in the court below in the Gould Manufacturing Company vs. Cowing, where the invention consisted of an improved com-

bination in a gas pump: "As appears by the evidence in this accounting, every pump consists of certain parts and can have no more. The only difference there can be between any two pumps is a difference in the combination of these parts. The patent must, therefore, be for the peculiar combination of such parts constituting a pump of a certain make. In every such case—in every case of a new combination making a machine of a new make, it would be impossible to separate the new parts from the old; it would be impossible to apportion the profits coming from any particular part or patented part. There is no patented part. The whole combination is patented. That a patent for a new combination is good has been long held. Any other rule would invalidate the most of the patents issued and would allow the great majority of patented machines to be infringed at pleasure, with no liability except for nominal damages."

If there exists no adequate and sufficient motive for the taking of the patented combination, the infringer, as a rule, will not take it; but if the certain acquisition of a profitable line of trade, fully developed and brought to readiness for a fruitful harvest by another, is involved in the act, then the infringer, if he be a resolute person, will not be apt to hesitate, but will break boldly in upon a monopoly which only the patent assumes to protect, and will accept his chances of ultimate accountability for a present hold upon large profits at the end of the delays and crafty expedients for obstructing indemnity wherewith proceedings for legal redress too often abound. In this case the head of the infringing house was an inventor. He was even one of the joint inventors in this very patent, having sold out his interest therein, which had become vested in the plaintiff. He knew well the condition of the trade which he was about to engage in, and whether or not, in order to obtain an entrance to it, there was need to seize upon and employ the combination of features which belonged under the patent law exclusively to another. For some adequate and sufficient motive in his mind he determined that the employment of other forms of mops which were open to public use, either by reason of the patents being expired, or as never having been patented, were unsuited to his purpose of making an effective entrance upon a large trade in this article.

The means he determined upon were piracy of the distinctive combination secured to the plaintiff, a large reduction in price, which the selling rates would authorize, and competition with the owner of the patent in his own article, in his own locality, at the door of his established trade, and in the presence of his own immediate customers.

The plaintiff declined to accept the gage of this illicit competition, or to make a serious reduction in his prices on account of it, and in conformity with an inevitable law of trade his customers went over, as it were, in a body from his factory on Henry Street to make their purchases at the defendants' factory on Niagara Street. If some other form of the article would have enabled the designs of the defendants with respect to the mop market to be carried out, can there be a doubt that they would have adopted it? That they did not employ such a course, but took the device of the plaintiff for the accomplishment of

their purposes, demonstrates that the use of this device was held by them to be essential to their proposed end, viz.: that of diverting the trade in the article from the plaintiff's factory to their own. The taking of the patented combination was therefore the means resorted to for the attainment of this purpose, and the theory now advocated or insinuated that these means were not necessary means is refuted by the deliberate, responsible and carefully studied acts of the parties.

(*e*) When the exceptions to the master's report in this cause were heard in the court below, in June, 1878, the decision which had been made by this court in the case of Elizabeth vs. Pavement Company, 97 U. S., Rep. 126, at the then preceding term had not been reported, and the argument proceeded without any knowledge on the part of the counsel of the application of the principle involved, which this court had made in the case named; nor was there in the opinion delivered by the court below, any allusion to the opinion of this court, which it is believed was not published until some time in 1879. As this court, is necessarily thoroughly familiar with the case referred to in all its features, we will allude to it only in brief to show that the question presented in the case at bar was directly passed upon by this court in that case, adjudicating upon a parallel state of facts.

As the bill in that case was filed before the act of July 8, 1870, the inquiry presented was one relating to profits and not damages, but so far as relates to the question whether there should be a separation between profits due to a combination made of certain elements and profits due to the use of one part or any number of parts less than the entirety of the combination, it is wholly immaterial whether the allowance in question be one of profits or of damages. The patent in that case, "An improvement in the art of constructing pavements," was, as stated by the court, for a combination of different parts or elements consisting "First, of the foundation prepared to exclude moisture from beneath; second, the parallel sided blocks; third, the strips between these blocks to keep them at a uniform distance, and to create a space to be filled with gravel and tar; and fourth, the filling." The court said, "Though it may be true that every one of these elements had been employed before in one kind of pavement or another, yet they had never been used in the same combination and put together in the same manner, as Nicholson combined and arranged them so as to make a pavement like his." Square sided or parallel sided blocks, for use in a pavement, with a packing of pitch and sand in the recesses between the blocks; blocks laid together with a mixture of sand and bitumen, and connected by keys laid in grooves; blocks leaning upon one another in rows with strips of board between the rows; alternate rows of blocks of different heights, and built upon a flooring of plank; rows of blocks laid on a board foundation cemented by a filling of cement or mastic; each and all were old, and in prior use to the pavement invented by the patentee; and the court disposed of these alleged priorities of

use by saying that: "None of these pavements combine all the elements of Nicholson's, much less a combination of these elements arranged and disposed according to his plan." The plaintiff prevailed in the court below and obtained a recovery of large profits, and the defendants on appeal assigned as error that: "The court erred in finding that the profits received by the defendants were the fruit of the use of the devices described and claimed in the first and second claims of the Nicholson patent, there being no proof of any advantage derived by the defendants from such use of the Nicholson devices; or was not incident to the use of the devices of the Brocklebank and Trainer patent. The failure to specifically show such profits makes the recovery nominal." This court after elaborate argument by counsel, disposed of the question presented in the following language:

"The next assignment of error, based on the hypothesis that the profits received by the defendants were not the fruits of the use of the Nicholson invention, appears to us destitute of foundation. This matter is so fully and ably presented in the opinion of the Circuit Court as to require but little discussion from us. The Nicholson pavement was a complete thing consisting of a certain combination of elements. The defendants used it as such, the whole of it. If they superadded the addition made to it by Brocklebank and Trainer, they failed to show that such addition contributed to the profits realized. The burden of proof was on them to do this.

"Equally without foundation is the position taken by the appellants, that other pavements approaching in resemblance to that of Nicholson, were open to the public, and that the specific difference between those pavements and Nicholson's was small, and that, therefore, the Nicholson patent was entitled to only a small portion of the profits realized. Nicholson's pavement, as before said, was a complete combination in itself, differing from every other pavement. The parts were so correlated to each other, from bottom to top, that it required them all, put together as he put them, to make the complete whole, and to produce the desired result. The foundation impervious to moisture, the blocks arranged in rows, the narrow strips between them for the purposes designated, the filling over those strips, cemented together as shown by the patent, all were required. Thus combined and arranged they made a new thing, like a new chemical compound. It was this thing, and not another, that the people wanted and required. It was this that the appellants used, and by using made their profit and prevented the appellee from making it. It is not the case of a profit derived from the construction of an old pavement together with a superadded profit derived from adding thereto an improvement made by Nicholson, but of an entire profit derived from the construction of his pavement as an entirety."

(*d*) In the case of Parks vs. Booth in this court, argued and decided at the October term, 1880, (102 U. S. Rep. 96), the patent in question

was for an improvement in grain separators, having two claims which were held infringed, both of which were for combinations of old and well known elements. The first claim was for the combination of the zig zag screens and boxes B C, when the same have a lateral shake motion, and are arranged relatively with each other to operate substantially as set forth. The second claim was for the series of zig zag screens and boxes B C having a lateral shake motion in connection with the fan G and spout H, substantially as set forth. There was no novelty in the screens or the boxes, or the arrangement of the screens and boxes or in the use of the fan and spout in connection with the employment of screens and boxes for a similar purpose. As was remarked by this court: "None of the elements or ingredients are claimed to be new, from which it follows that the invention consists *entirely in the combination*," and the invention included in the combination was in its nature so restricted that the court said: "Most or all of the inventions described in those publications bear more or less resemblance to that claimed by the complainant, and it may be that if it were allowable to test the validity of the invention in question by comparing the same with the whole as if embodied in a single exhibit, the evidence might be sufficient to support the views of the respondents in respect to the defense under consideration. *Were that allowable it might well be suggested that the screen is found in one, the box in another, and the means to produce the lateral shake in a third, and so on to the end; but it would still be true that neither the same combination in its entirety nor the same mode of operation is described in any one of the patents or printed publications given in evidence.* Attempt is scarcely made in argument to show that any one of these exhibits embodies the entire invention of the complainant, but it is insisted that every feature of the patented improvement is found in some one or more of these publications. Suppose that is so, still it is clear that such a concession if made could not benefit the respondents unless they can be allowed to extend the same comparison to two or more exhibits as they do not contend that the entire invention is superseded by any one of their exhibits."

In this case the master awarded to the plaintiff the profits of the defendant's manufactures assessed on the entire article. The defendant excepted on the ground that the master should have confined the award to the profits on the features of novelty embraced in the patented machine, that the profits or damages should be limited to the value of the improvements only, and that an assessment of the defendant's profits on the entire machine was error. The circuit court confirmed the master's report, and from the final decree the defendants appealed to this court. The doctrine of the case at bar, as laid down by the court below, was quoted in the brief of the counsel for the appellant, and it was insisted that the appellee had utterly failed to distinguish his improvement covered by his patent from the entire machine, and consequently could recover only nominal damages. On the part of the appellee it was argued that the patented machine was an entirety and not a separable improvement, as the seat in the McCormick case, nor an improvement in a process as in Mowry vs. Whitney that the machine was a unit and made and sold as such, and that there was no other

machine in the market that would answer the purpose of the plaintiffs' machine. The decree of the court below overruling the exceptions to the master's report so far as relates to this question was affirmed.

(*e*) The assessment of damages before the master in the present case took place in May, 1876. Instead of having for his guidance the case of Elizabeth vs. Pavement Co., not then decided in this court, or the case of Parks vs. Booth, not then argued, his deliberations and decision were controlled by the then recent decision and exposition of the law of damages made by Mr. Justice Hunt in the case of the Gould Manufacturing Co. vs. Cowing.

The master says in his opinion, bearing date of May 15, 1876: "The rule of damages laid down by the Circuit Court in Gould's Manufacturing Co. vs. Cowing, 12 Blatchford, 245, is that when the patent is for an improvement of a machine the complainant can recover only such damages as are occasioned by the use of the improvement; and the inquiry is, what profit or advantage did the defendants acquire by reason of their use of the improvement only, and not by the manufacture of the whole instrument. In support of that rule other decisions are cited, and I suppose the decision I have quoted must be considered binding and conclusive upon the master in this case, as settling the law for his guidance."

The opinion to which the master here refers contains the following language:

"The principal question arises upon the third exception, and regards the rule for the measure of damages adopted by the master. The complainants proved the expenses of making and selling the pumps in question; that they were prepared and ready to fill the orders taken by the defendants, and the prices at which the pumps were sold by the defendants. The master found the damages to be the difference between such expenses and such prices, and reported accordingly. If the plaintiffs had been the inventor and patentee of pumps, or of double acting pumps, the argument would have been strong in favor of the rule adopted. But the invention patented and infringed was of an improvement upon pumps merely; such was the decree, which did not restrain the defendants from making pumps or even the pumps in question, but only certain devices forming a part thereof, and which devices the court adjudged to be an improvement belonging to the plaintiffs which had been infringed by the defendants. * * * *

"Pumps have been in use since the earliest ages of the world. Double-acting pumps like the one in question have long been in use. Double-acting pumps having cast a side chamber to allow the medium to follow the action of the plunger, have long been in use; and in this patent it is expressly stated that this is not claimed as an invention of the plaintiffs. The base, the cylinder, the top, the piston, are the same in general arrangement as are used in ordinary double acting pumps. These things are not claimed by the plaintiffs to be within

their improvement; their use is free to the defendants. Only a special construction of the side chamber is claimed, whereby the same is adapted to use with the valve casings bolted on the outside.

"Valves must exist in every pump, and they must open on the outside; they are located in hollow casings, but this the inventor in his patent says that he does not claim.

"The portion of the pump in question which belongs to or is included in the improvement of the plaintiff is very small, and a machine constructed upon other known principles and devices applicable to pumps omitting the plaintiff's improvement would include nearly everything useful that is to be found in the present machine. A different view of this matter of fact is the basis of the master's opinion. I judge the master holds the plaintiff's improvement to be more extensive than it is. The proposition is simply this: The patentee takes the well known portions of a pump used in pumping gas-oil, with passages, valves, piston, chambers, openings, etc., as ordinarily made and used, and adds a chamber of an improved construction, as it is alleged, and in combination with certain other parts described. Now, if this addition is not a new and useful improvement no damages can be claimed for its use. If it is such an improvement, the improvement in its nature and by law is, and must be capable of being described and pointed out, and must be described and pointed out. Every skillful mechanic must be able to learn from the patent itself precisely what the monopoly covers. (Act of July 8, 1870, § 26.) If this alleged improvement is so confounded with portions of the machine which are the subjects of other patents, or which, from long continued use, are open to the public, that it cannot be separated from them, or if, when so separated, it has no value, it is not a patentable invention, and no damages are due for its use. The decree in this case has adjudged the patent to be valid; in its nature therefore it is and must be capable of separation and distinction from other portions of the machine."

With all proper deference to the learned judge by whom the foregoing views were pronounced, it is submitted that when it is considered what the nature is of a patented invention in a machine in which several elements, none of them in themselves new, are combined, all uniting to perform some single function or operation in an improved manner is, it would be, it is believed, hardly possible to employ language in a way to embody a greater amount of positive misconception. Nevertheless, as the master deemed this decision to be authority in the second circuit, and that in its facts it was closely parallel to the case before him, his opinion became naturally a paraphrase of the language of Mr. Justice Hunt in the opinion above quoted. He therefore says:

"The complainant's invention has peculiar and distinctive features in the form of construction and operation referred to, but these features alone do not constitute a mop, and there were many valuable mops in the market before these features were at all introduced. * * * *

"The complainant has given no testimony before me to satisfy my mind that the sole salability of the mops in question arose from their possessing the features I have referred to as embodied in the complainant's invention. These features are the form of construction of

the collar in two pieces, the mode of connecting the collar and the nut, the presence of flanges on the latter, and its enclosure within the circuit of the former. The nut, the collar, the wire binder, the cross head fixed and riveted to the handle, the grooving of such cross head, the notching of its ends to steady and guide the wire binder, the threaded shank, the connection and securing of the wire binder to the collar; all these are independent of the plaintiff's improvement, and most of them are old in the history of the invention.

"Yet they contribute to the successful operation of the mop and are found in the mops of the complainant as well as those made by the defendants.

"Combinations of these various elements of invention in different forms are found in most, if not all, of the exhibits in the case. Some of these elements are common to all the successful mops spoken of by the witnesses, and may be considered as quite indispensable to the construction and practical operation and salability of the instrument.

"I cannot believe that none of them contributes any value to the mops in question.

"As these elements and combinations exist in the mop made and sold by the defendants, and adjudged to be an infringement, the finding of more than nominal damages for the complainant would, on the complainant's theory, involve the proposition that there is not among all of these elements or combinations any one that involves a principle of sufficient practical use to add to the salability or actual value of the machine.

"I believe, on the contrary, that all of these elements have combined to make the mops in question successful, and it is too much to say that no proportion of the trade diverted from the complainant by the defendants, or of the profits they realized from the sale of their mops was due to the presence of some one or more of them.

"At least, while so many elements of success are present in the instrument, I would not be warranted in finding that its entire success was due to its embodiment of the complainant's invention, unless direct evidence on that subject were furnished.

"As no evidence has been given before me of damages resulting to the complainant or of profits accruing to the defendants from the manufacture and sale of the improvement of the complainant, as distinguished from the machine itself, I find for the complainant nominal damages only."

Confirmation of the views of the master by the court below was opposed in that court on the part of the plaintiff in the following criticism of his position and argument, which we beg leave here to quote and repeat:

"The view which the master has taken in his opinion substantially ignores the proofs given in the case and ruled competent by him in relation to the market in the article, and his conclusion is predicated rather upon an abstract discussion of the relative values, in themselves considered, of the different parts of the mop, (patented and unpatented), as it exists for use in the hands of any one who may work with it. He has considered the *mop of service* rather than the *mop of the*

trade made or to be made to run for profit or loss its race of competition with other articles for sale in the market.

As a mere article of use there are undoubtedly parts of the mop other than those claimed by the complainant's patents which are essential to the successful operation of the implement. When the mop head is made it still needs a handle, and before the user can put it in practice it must be furnished with a mop cloth. In the point of view in which the master discusses the subject, even the mop cloth would be entitled to share in the assessment of the relative values of the parts. In one sense of utility, certainly the parts and arrangements described in the complainant's patents do not comprise all there is of the mop.' It is true, as the master says, 'that these features do not constitute a mop;' that there are other parts 'found in the mops of the complainants as well as those of the defendants, which contribute to the successful *operation of the mop;*' and any one 'of the many valuable mops in the market before these (patented) features were introduced,' already purchased and paid for in the hands of its owner would be useful for service and would possess an appreciable value to him as property and quite likely would even have a market value at some low rate. In this sense it cannot be true that the patentee 'by the introduction of a new mode of operating and constructing one [some] of its parts has added to it all that there is valuable in it,' or that 'the invention covers the whole ground and lends to the article manufactured by the defendants all its value.' We admit that mops constructed without the complainant's inventions could be made practically serviceable and not unlikely might possess, in a small way, a limited kind of salability. Even apart from their form as a mop, the materials of which the implement should be composed would have their value and be salable.

On such a line of reasoning as this, however, we should never arrive in this case at a result which would serve its substantial merits, and answer the ends of an enlightened equity. To reach such a result the mop must be considered as an article of commerce under the operation of those known laws by which, in a civilized and ingenious age in the trade of a country, the improved article will supersede and displace the unimproved one, driving it from the possibility of being produced at a profit, and by this means causing its non-existence, the superior article, by virtue of its superiority, dominating the market until the time comes when it in turn will be compelled to give way to the onward course of new inventions in its kind."

The case of the Gould Manufacturing Company vs. Cowing, after struggling with the reports of two successive masters based on different views from those contained in the opinion cited, was disposed of in the circuit court by Judge Johnson declaring that the previous decision furnished the law of the circuit, which no judge had a right to review or modify except on appeal, and that the attempt to get rid of that decision by the facts stated in the report of the master must necessarily fail; that to a court which had decided *that evidence of a particular fact was necessary, it was no answer to say that it could not be given;* and that the consequence of that state of things was that the party on whom the burden rested must fail. He accordingly sustained the de-

fendant's exceptions to the report of the master, and gave the plaintiff nominal damages only.

On the review of Gould Manufacturing Company vs. Cowing in this court, the view taken by this court and declared in its opinion was in entire harmony with its previous decisions in the case of Elizabeth vs. Pavement Co. and Parks vs. Booth. The court here said:

"The rule applicable to this class of cases was well stated by Mr. Justice Strong, speaking for the whole court, in Mowry v. Whitney, 14 Wall, 620. The subject matter of that suit was a patent for an improvement in the process of manufacturing car wheels, and in respect to the profits resulting to an infringer from the use of the patented process, it was said (p. 651), the question to be determined is, what advantage did the defendant derive from using the complainant's invention over what he had in using other processes then open to the public, and adequate to enable him to obtain an equally beneficial result. The fruits of that advantage are his profits. It does not necessarily follow from this, that where the patent is for one of the constituent parts, and not for the whole of a machine, the profits are to be confined to what can be made by the manufacture and sale of the patented part separately. If, without the improvement, a machine adapted to the same uses can be made which will be valuable in the market, and saleable then, as was further said in the case, the inquiry is, 'what was the advantage in cost, in skill required, in convenience of operation or marketability,' gained by the use of the patented improvement? If the improvement is required to adapt the machine to a particular use, and there is no other way open to the public of supplying the demand for that use, then it is clear the infringer has by his infringement secured the advantage of a market he would not otherwise have had, and that the fruits of this advantage are the entire profits he has made in that market. Such, we think, is this case. Pumps for all ordinary, and many extraordinary uses, were very old; but in the new developments of business something was wanted to take the gas from the casing of an oil well and conduct it safely to the furnace of the engine. "With that special purpose in view," this inventor took the well known parts of an ordinary double action pump, changed some of them slightly in form, added a new device, and produced something which would do what was wanted. While nominally he only made an improvement in pumps, he actually made an improved pump. For ordinary uses the improvement added nothing to the value of the old pump but for the new and special purpose in view, the old pump was useless without the improvement. The testimony shows that there was no market for pumps adapted to this particular use, except in the oil producing regions of Pennsylvania and Canada. The demand was limited as well as local. Less than a thousand pumps actually supplied all who wanted them. But for that particular use no other pump could at the time be sold. If the appellant kept the control of its monopoly under the patent, it alone had the advantage of this market. Unless the appellees got the improved pump they could not become competitors in that field, and just to the extent they got into the field they drove the appellant out. Through their infringement they got the advantage of selling the

pumps that had upon them the patented improvement. Without it no such sales would have been effected. The fruits of the advantage they gained by their infringement were, therefore, necessarily the profits they made on the entire sale. * * * * By infringing on the appellant's rights the appellees obtained the advantage of the increased marketability of their pumps. The action of the court below, therefore, limiting the field of inquiry as to damages, cannot be sustained."

In Gould Manufacturing Company vs. Cowing, the evidence contained in the record showing that the plaintiff's pump had superseded all other pumps in the particular market which they had, was confined to a single sentence of the inventor, Pollard, a witness for the plaintiff, who testified: "Upon the introduction of our pump it virtually controlled the market, and drove all others from the market. There were a few others, I presume, put in." The testimony was so meager that the court remarking upon it inclined "to think that all had not been sent here which was presented." Aside from the showing of the limited area of the market for the class of pumps in question, and the scantness of the evidence to prove that the improved pump had superseded others, the case of Gould Manufacturing Company vs. Cowing bears very close similarity to the present case. The place of manufacture of the infringing article was in the same town with that of the plaintiff's; the sales made were in the same locality, and to persons who had been the plaintiff's previous customers. The demand for gas pumps was limited to the few hundred required in the immediate vicinity of the oil wells, as the total annual demand for mops in the general market was limited to from thirty to thirty-five thousand dozens. Substituting the word "mop" for pump, what was reported by the master in that case is true in this: "The defendants went into the very market where the plaintiff's pump had been introduced, and where they had sold, and where plaintiffs were then supplying most of their pumps." "Had not the defendants interfered in urging the pumps which they manufactured upon this local market, the plaintiffs would certainly have had the whole market to themselves, and would, beyond doubt, have secured orders and supplied the demand of the market for the same number of pumps more than they did sell, as the defendants furnished." A feature of unlikeness between the cases with respect to the proof of the plaintiff's patented devices having superseded others, is that in the present case the evidence given on that subject is full, minute and detailed, and therefore satisfactory, which, in the former case, it was not. The distinction between the two cases, if a distinction may be found, can be only in the fact that the market for the improved gas pump was a local market, limited by the area of the oil-producing district, whilst in respect to the Garretson mop, its market was general, applying to a greater extent of country. It cannot be perceived, however, that this distinction can constitute any difference of principle whatever. It relates merely to the ease and facility of making proof of the fact to be proved, viz: that the improved article had superseded competing forms, so as to control the market, but in no sense whatever is it capable of varying the effect of the fact when proved. If the gain to the defendants by their infringe-

ment was that of a market which they could not have had except for their infringement, it is a matter of not the slightest importance what may be the size of the area of country in which this illegal displacement of the rightful trade occurs. The gain or advantage to the defendants is the same in the one case as in the other, and the loss and disadvantage to the plaintiff is just the same a substantial and commercial one, finding its exact and legal expression in dollars and cents.

(*f*) It is indisputable in this case that the defendants made their sales of the infringing mops by reason of their use of the plaintiff's patented improvements. This was the key by which they obtained admission to the market, and by means of which they were enabled to carry off the spoil of large profits. The record abundantly shows that aside from the patented devices of Taylor and Garretson there was at that time no known form of mop which was acceptable to the trade.

The following is from the plaintiff's testimony (fols. 212, 213).

"Ques. From the close of the year 1871 to the thirteenth of March, "1874, in your business as a manufacturer of your patented mops, "what other mops entered into competition with you, if any, in the "general trade of the country?

"Ans. There was no other mop in the market that had any consider- "able sale that I had to compete with. There were a few made here "and there, but not to any considerable extent.

"Ques. During the period named what mops furnished the substan- "tial supply of the country at large?

"Ans. There were two mops; my mop known as the Garretson mop "and another mop known as the Taylor mop.

"Ques. During the period named was the Taylor mop in competition "with yours?

"Ans. It was not."

After naming a few inferior mops which were sold to a limited extent and at low prices he was asked to

"State whether any of these mops you have named in your last answer "had a general sale throughout the country to the trade at large.

"Ans. None of them had what I consider a general sale or even any "considerable sale." He testifies that the sale of wooden mops was very limited and the prices very low ($0.50 or 60c. a dozen), and that no appreciable amount of profits could have been realized from their manufacture and sale; that the defects of what was known as the Manchester mop were that "the head was pivoted to the handle in such "manner that in using the mop the cloth was constantly working loose "and the head being separate from the handle was liable to come off "and become lost;" that the mop "was heavier than his mop, and "required more cast iron and wire to make it, and cost more than his "mop to manufacture," and was sold at about $1.50 per dozen or less. (Fols. 214, 215.)

The evidence of Mr. Mason, one of the firm of Smith, Mason & Company was of a similar tenor:

"Question. During the period of this last statement, (1872 to 1875, "inclusive) what mops, if any, have been in competition with the Tay-"lor mop in the general market of the country?

"Ans. No mop that interfered with our maintaining our prices, with "the exception of the one manufactured by the defendants in this suit." (Fol. 253.) "We have had no competition between Mr. Garretson and "us since 1871." (Fol. 253.) This witness judged there were two or three thousand dozens of the Manchester mop sold in 1872 and 1873, but not many in 1874 and 1875. It never interfered with their maintaining their prices on the Taylor and Garretson mops. (Fol. 254.) The mop sold at Winchendon, Mass., called the Spring Mop, was not sold generally to the trade. It sold to peddlars." There was a mop manufactured at Lebanon, New Hampshire, but the sale was very limited. "There has been quite a number of mops started, and went out since I have been in the business, and never got into the general trade." The sale of wooden mops was so limited he did not consider them in the market. The Manchester, the Lebanon and the Spring mops were each sold about twenty-five to fifty cents less than the Taylor, and their cost of production would be about the same. (Fol. 255.)

From all this evidence the substantial fact plainly and fairly appears that as against all forms of mops patented or unpatented which were known to the market at the time the defendants' infringements began the Taylor and Garretson mops had a clear field. Their combination as to prices was not an advantage to them in enabling them to retain their control of the market; it had the opposite effect, holding out the tempting proffer of large premiums to any other form of the article which could enter upon the arena and compete with them. No manufacturer was found ready to accept this competition, even with prices held firmly at two dollars per dozen. There was but a single reason for this: that the devices patented by Taylor and Garretson were acceptable to consumers and the trade. They held possession of the market by their features of mechanical adaptation to the use for which they were designed.

It is said in the opinion of the court below that "it is a weak point in the argument for the plaintiff that it assumes without sufficient evidence that the market for the plaintiff's mop was made solely by the fact that the mop contained the improvements patented by the plaintiffs' patents." That the features of the patented invention were such as to characterize and make the recommendation of the article in the hands of the user, (fol. 214), causing dealers in the article to send their orders direct to the plaintiff without solicitation, (fol. 211,) and that the mops sold by the plaintiff did have, as against any other than the Taylor mop, practically undisputed control of the market, were as we have seen facts proved before the master. Is it too much to say that at least presumptively, in the absence of every sort of evidence to the contrary, that these two last statements bore the relation with respect to each other of cause and effect. The defendants had an improper desire for the

fruits of Taylor's or the plaintiff's invention, without themselves possessing or being able to produce a rival device wherewith to qualify themselves for competition. They wanted of the plaintiff his market, and they took it by an act of direct palpable and deliberate piracy of the invention to which he held sole title.

(*g*) The plaintiff is entitled to recover damages in this cause in excess of the profits of the defendants for the reason that the intrusion of the defendants was into the very market which the former had established, displacing him as a manufacturer from furnishing the trade with the article to which his patents secured him the monopoly. The plaintiff was not merely *entitled* to the trade in his article; he was in point of fact the exclusive *possessor* of it, when the defendants made a seizure, not merely of an invention which they had no right to take, but of a fully formed and established line of traffic which the plaintiff had founded. Complainants' Exhibit No. 1 shows that out of the 12,699½ dozens of infringing mops sold by the defendants, (names of the purchasers having been given in Exhibit A., the defendants' account rendered of their sales), 9,338 dozens were sold to persons who had been prior customers of the plaintiff for the article; 2,457½ dozens were sold in small lots to small dealers who usually bought of wholesale dealers customers of the plaintiff; and that only 904 dozens were sold to wholesale dealers who had not been the plaintiff's previous customers. (Fols. 314, 315, 208, 209, 210.)

When the locality is considered where the business of the parties respectively was carried on, and the facts that the defendants made a reduction of about twenty-five cents per dozen upon the plaintiff's price, who on his part refused to accept substantially lower terms than had previously ruled; that the defendants made a mop so nearly like the plaintiff's that, as testified by Mr. Mason, neither article would have a preference over the other with a buyer, except on the score of price, and that a difference between the articles in price would be controlling; (fol. 259), it is not too much to say that to all substantial intents and purposes the sales of the 12,699½ dozens of mops were taken out of a market which but for the infringement would have been the plaintiff's to supply.

The measure of damages in the present case should be the difference between what the infringing mops would have cost the plaintiff to produce and sell (including proper allowances for general expenses) and the price which, except for the competition of the infringer, the plaintiff would have been able to obtain for the same.

Bigelow Carpet Company vs. Dobson, McKennan, J., 10 Federal Reporter, 385.

American Saw Company vs. Emerson, 8 Fed. Rep. 806.

Putnam vs. Lomax, 9 Fed. Rep. 448.

Spalding vs. Page, 4 Fisher 648.

Ruggles vs. Eddy. 12 Off 716 2 13 O.G. 627.

Mulford vs Bance 11 Off 742 2 13 O.G. 542

Sirignat vs [illegible] 2 Fisher RC 207

Buck vs. Hermance, 1 Blatch 398, 406.
Pitts vs. Hall, 2 Blatch, 229.

Careful and accurate statements in detail are made in record on the part of the plaintiff of all the items of cost in the manufacture and sale of his mop, including materials, labor, freight, and a fair apportionment of the general expenses of his business based upon the manufacture of the actual number of mops which he did make and sell during the period of the infringement, (complainants' Exhibit No. 2), (fols. 315, 317, 217,) and also based upon the supposition that in addition to his own he had had the making and selling of 12,699½ dozens sold by the defendants, (complainants' Exhibit No. 3), (fols. 318, 319, 218,) the result being in the former case an average cost of $\$0.94\frac{24}{100}$ per dozen and in the latter case of $\$0.85\frac{625}{1000}$ per dozen, (fol.211.) The average selling price which the plaintiff obtained during the period of the infringement is shown to have been $\$1.96\frac{166}{1000}$, his previous sales for two years and upwards having been at $2.00, (fol. 211.) Nothing in the cross-examination of this witness shows in the least item any lack of accuracy and care in the figures contained in these Exhibits. They are, we believe, as authentic and reliable statements as a person possessed of all the sources of information and facilities for accuracy under proper instructions could make; nor is there the slightest ground for doubt that the plaintiff possessed full facilities for the manufacture of the entire 16,541½ dozens, (fol. 211.) In 1870 he had sold 9,529 dozens; in 1871, 12,851 dozens; in 1872, 7,855½ dozens, and in 1873, 9,144 dozens. He was in a condition, he testifies, "to fill all ordinary orders for mops, even far more than he had ever had or could reasonably expect." (Fol. 211.) The allowance of damages to the plaintiff, according as Exhibit No. 2 or Exhibit No. 3 is adopted, would be $12,944.09, or $14,038.15. And a recovery in his favor at either of these amounts would include nothing for the reduction of his own prices below $2.00 per dozen, or for the permanent injury to his traffic accomplished by the infringement, but developing its full effects during a later period.

(*h*) The facts of the present case do not call for the exercise of special grace and favor toward the defendants. Charles B. Clark, the head of the defendants' firm (fol. 310), a joint inventor with the plaintiff, after selling and disposing of his share in the patent mainly involved, attempts, by the showing of the record, to unswear his oath of joint invention and destroy the title of his associate, including the one-half interest which he himself had sold and been paid for, boldly retakes possession of the manufacture embraced by the patent, demoralizes the trade of the plaintiff the lawful owner of the monopoly, and obtains for his firm a large gain of profits. The infringement in the case bears the extreme mark of being willful and wanton, and the entire firm had personal notice given them of the plaintiff's rights (fols. 220, 303, 309). As the plaintiff cannot recover interest on his

damages which accrued over eight years ago, he ought not any longer to bear the risk of the defendants' insolvency, or to incur fresh delays which would be incident to a second accounting before a master, and it is, therefore, hoped that this court may be able to remand the cause with instructions as to the proper amount for which a decree should be entered in favor of the appellant, against the appellees.

SECOND.

PROFITS.

The court below erred in overruling the plaintiff's seventh exception to the master's report, for that the master had omitted and refused to certify that the amount of the profits made and received by the defendants, by reason of their infringement adjudged by the decree to have been committed, were, for each and every dozen of the infringing mops made and sold by them, the difference between what the manufacture and sale per dozen cost to them, according to their schedule produced in evidence, marked defendants' "Exhibit E," as surcharged and rectified by the proofs in the case, and what said infringing mops sold for per dozen, according to defendants' "Exhibit A," and that the aggregate of such profits was the difference per dozen multiplied by the whole number of dozens of infringing mops shown to have been made and sold by the defendants, viz.: 12,699½ dozens; and that the court below erred in overruling the plaintiff's (twenty-first) exception to said master's report, for that the master had admitted and received evidence establishing the amount of the profits made and received by the defendants by reason of their infringements, and had held such evidence to be competent and admissible, whilst at the same time, in his report, he had refused to consider and give effect in and by his findings to the said evidence so received and admitted by him.

(*a*) As the bill of complaint in this cause was filed subsequent to the act of July 8th, 1870, if a case has been made out for the recovery of damages on the basis above contended for, the inquiry repecting profits becomes immaterial since the aggregate of damages is shown to exceed that of the profits. Whether damages or profits in this case should be estimated upon the entire article, or whether some sort of separation of the patented features from whatever else the article consists of is necessary to be made, is determined by the application of the same

principles and on the same authority. If the evidence contained in the record fails to satisfy the court that the plaintiff could have made and sold substantially the whole number of infringing mops sold by the defendants if the defendants had not made and sold them, then as to such part of the defendant's sales (if any) as the court should be satisfied the plaintiff could or would not have made, the proper inquiry becomes one of profits and not of damages. The defendant, John K. Clark, being called as a witness on behalf of the defendants, produced at the request of their counsel a statement in writing, defendants, "Exhibit E," (fol. 325) which he verified as an accurate estimate of the cost of manufacturing the infringing mops sold by the defendants, and of the profits which they had realized therefrom (fols. 281, 324, 325,) which concedes an actual net profit from sales of $4,739.93. On the foot of this exhibit an inquiry followed as to the correctness of the estimate in respect to the different items which are comprised in it, and the bills of the defendants' purchases of materials were to a large extent produced and examined before the master. The result of the investigation disclosed as claimed by the plaintiff a wide variance between the exhibit and the evidence and vouchers; on the item of handles the sum of $414.97; mop wire $186.40; allowance for handles on 4,800 mops shown by "Exhibit A" to have been sold without handles, $92.50; on the cost of moulding an excess of $190 was proved. The most important rectification made in the figures of this exhibit related to the item of labor.

A book of account was put in evidence, marked complainant's "Exhibit No. 9," (which is not a part of the printed record, but which, by the stipulation of the solicitors and an order of the court below, has been forwarded to this court), identified as the wages book of the defendants, containing the time and earnings of their employes for labor, the names of the men engaged on mops being stated by the witness John R. Clark, and from which it appears that the amount expended for labor was not in excess of about the $1.25 per gross allowed therefor in Mr. Garretson's statement. The exhibit makes an aggregate estimate for labor, molding excepted, of $4.29 per gross (fol. 325); whilst the evidence of the plaintiff showed that the same work was done in full in his factory by contract at the price of $1.20 per gross (fols. 234, 235).

The discrepancy arising in this single item would amount to the sum of $3,225.18, or thereabouts; and it is contended by the plaintiff that, under the proofs, it was fairly established before the master that the profits realized by the defendants from the infringing mops were in excess of the sum of $8,848.98 (fol. 384).

(*b*) The answer of the defendants sets up that their manufactures of mops were made under and in accordance with some or all of the following letters patent: No. 82383, September 22, 1869, to Clark and Ferguson; Nos. 145397, December 9th, 1873, and 128711, July 9th, 1872, to Charles B. Clark (fol. 18).

With regard to the first of these, the witness, John K. Clark, could not testify to more than an impression that the defendants held the right to this patent, or whether it was not held by one English (fols. 280, 304). Comparison of this patent with the mops produced in evidence (not now before us) representing the defendants' infringements marked "the defendants' Exhibits Nos. 6, 7, 7½ and 8," will, we think, show that the defendants, in their manufactures, did not use the combination specified in the claim of this patent, including the flanges c c′ and elongated openings in the collar (fol. 179).

In respect to No. 145397, December 9, 1873, the invention related to a manner of casting the cross-head by which a more compact arrangement of the patterns could be made in the flask, which was constructed to be divided transversely of the length of the head, instead of laterally, as had been usual. The only other thing contained in this patent was a nib or slight cast projection in the recesses of the collar to aid in fastening the ends of the wire constituting the movable jaw (fols. 190, 191).

In regard to No. 128711 dated July 9th, 1872, the patent comprises nothing of importance outside of claims contrived with the object of producing an evasion of the devices patented to the plaintiff and which the court below has held unavailing for the purpose. Instead of the threaded shank and nut of the plaintiff which the defendants preferred not to copy literally, there was the double series of rack teeth on the shank and inclined feather on the nut, performing the same office in operating the movable jaw in the same way; instead of an annular flange on the nut revolving in a single groove on the collar, two similar grooves were provided, in each of which one of two opposite spurs on the nut was made to engage. Being prohibited by the plaintiffs' letters patent No. 67643, August 13th, 1867, (declared by the court below to have been infringed by them) from making the collar of the loose jaw in two parts so that the nut might be placed between them and the collar surround the nut and retain it in position, an evasion was sought in making a horizontal instead of a vertical division of the collar to which the patent was interpreted as being limited. Its only other feature was a small recess in each of the wings around each extremity of the wire as an aid to fastening. Only a portion of the different features mentioned are shown in any single specimen of the infringing mops. There was no evidence put into the case on the part of the defendants showing that the defendant derived any advantages from the use of any of the small features to which their subsequent patents related. If any advantage or profit was derived by them from such use the burden of establishing and appreciating it was upon them. City of Elizabeth vs. Pavement Company, 97 United States Reports 126.

With the use of such of these features as they employed the expense of the manufacture of their mops considerably exceeded the expense of the plaintiff's manufacture. It cannot be fairly inferred that such features became in any sense or to any extent a source of profit to them. The devices referred to are fairly characterized by saying of them that in the main part they are mere shifts and evasive subterfuges for the purpose of avoiding the charge of infringement. A case for the recov-

ery against the defendants of the full amount of their profits as shown by the defendants' "Exhibit E." (fols. 324-5), surcharged and rectified by the other proofs is made out. (Fol. 384.)

THIRD.

MOTION FOR RE-HEARING.

The court below erred in sustaining the master's report granting the plaintiff nominal damages only and in overruling the plaintiff's exceptions, numbered first, second, third, fourth and fifth to such report on the ground that actual damages or actual profits should have been assessed and awarded in his favor.

The rule declared by Justice Hunt in the Gould Manufacturing Company vs. Cowing having been applied in this case by the court below, and the claims formulated in the sixth and seventh exceptions to damages or profits assessed on the entire article disallowed, the plaintiff moved for a re-hearing in the court below on the ground that assuming that the rule which had been laid down for estimating the profits or damages was correct, the only kind of separation required by the decision of the court which the nature of the case would admit of, had in fact been made in the evidence adduced; and that in the view which the court had taken of the present case this character of proof had been excluded from consideration. The petition for re-hearing sets forth the evidence contained in the record which would establish a basis of damages or profits in favor of the plaintiff on the footing of the rule referred to,—on a construction thereof which the plaintiff insisted was the only one under which it would be possible for such rule to be practically applied—to an extent such that the award of nominal damages would be erroneous. (Fols. 376–384.)

To avoid the expense and delay attendant upon an appeal of his case to this court, the plaintiff would at that time have accepted as a final disposition, an allowance of damages based upon the comparative view of the selling price and cost of his own mop, and those of the Manchester, the Spring and Lebanon mops mentioned in the evidence, the cost of production of each of the latter being as much as or more than that of the plaintiff's, whilst the amount per dozen realized was from twenty-five to fifty cents less. The reason why the allowance to the plaintiff of this difference as his rightful damages or profits would be grossly unjust to him, is that neither of these mops had or could have any general or extensive sale in the mop market; with each of them such market as it had was local and very limited, the Spring mop being one not sold to the trade, but worked off by peddlars in the rural parts of

New England, the Manchester mop being made with the pivoted or swinging head easily loosened in service, and its sale not exceeding at any time two or three thousand dozens a year; such wooden mops as were sold being in effect a different and inferior article of trade, selling for the small price of six or seven dollars per gross, which would be about fifty cents per dozen. Neither of the mops mentioned would have been available to the defendants as a mop competitive to the plaintiff in the general market. Each of them was capable of having only the most restricted sort of sale, and was a structure plainly unavailable for the extensive inroad on the market which the defendants purposed to make. Though subject to their use and call as unpatented devices, had they chosen to make resort to them, these implements were promptly discarded if indeed they were ever seriously thought of by them.

Unless the construction put by the court below in denying the motion for rehearing upon the rule laid down by Mr. Justice Hunt, in Gould Manufacturing Company vs. Cowing, is correct, viz: that the separation required must be one made necessarily between patented and unpatented features in the very article which the defendants manufactured and sold—a thing plainly impossible to be done—even the rule of the court below in Gould Manufacturing Company vs. Cowing, could not be so applied in this case as to deprive the plaintiff of the difference in selling profit between his mop and the Manchester, Spring and Lebanon mops.

But as the best of the last named structures would not admit of an annual sale, in the most favorable times, of more than two or three thousand dozens, and could not be made competitive to at all affect the prices of the Taylor and Garretson mops, the basing a decree in this cause on the comparison indicated, would be oppressive to the plaintiff, and would operate in the larger measure as a denial of compensation for his injury. Nevertheless, as the only objection to this basis of damages is that it is not sufficiently favorable to the plaintiff, the first, second, third, fourth and fifth exceptions to the master's report were improperly overruled, inasmuch as, under the application of the rule and theory of damages which the plaintiff here contests and the defendants contend for, the plaintiff should have been allowed a substantial, and not a nominal recovery.

FOURTH.

IRRELEVANT EVIDENCE.

The master and the court below erred in receiving and considering evidence relating to the sale of mops at a period subsequent to that of

the defendants' infringement, and in overruling the plaintiff's exceptions thereto (numbered eighth, tenth, twelfth, thirteenth, fifteenth and sixteenth).

At the original hearing a wrought-iron mop, which had long ceased to be on sale, was produced in evidence and marked "Exhibit F," and the defendants having made of cast-iron two specimens of the same mop, produced one of them at the original hearing, marked "Exhibit I," and the other subsequently on the assessment of damages before the master, marked "Exhibit D" (fol. 285).

This mop was one in which a nut was placed on the threaded shank between the movable collar and the fixed jaw and was made to operate the movable jaw in one direction only, the thumb pieces of the nut being placed of course on the inner side between the collar and jaws.

Of this mop the plaintiff testified on the original hearing that it had "not been manufactured, sold or used in the United States to any considerable extent since he had been acquainted with the mop market." (Fol. 55). After the writ of injunction had issued in this cause against the defendants pursuant to the interlocutory decree made by Judge Woodruff, which bears date May 11, 1875, the defendants undertook to modify the mop referred to and galvanize it into a mop for market, making it of cast iron and adding to it certain alleged improvements for which they took out a patent under date of August 3rd, 1875, (fol. 306), the invention such as it was, having been made during the previous month of June, (fol. 283). For want of a better article and having previously had a large trade in a good mop, they resolved to press this new mop upon the market as a substitute for those which they were prohibited by the injunction from selling. Of this mop of which the Exhibit was marked "Defendants Exhibit I," before the master, the defendant, John K. Clark, was allowed under objection, to testify that since July 1st, 1875, when it was introduced, the sales therein did not vary much from previous sales of the mops covered by the accounting, (fol. 283), and that as nearly as he could estimate the defendant had sold from July 1st, 1875, to January 1st, 1876, in the neighborhood of five thousand dozens and at the price of $1.75 per dozen, the mops being more cheaply produced than those which were within the accounting. (Fols. 305-6). It is to this piece of evidence that the master refers in the latter clause of the following paragraph of his opinion:

"The complainant's invention has peculiar and distinctive features in the form of construction and operation referred to, but these features do not constitute a mop, and there were many valuable mops in the market before these features were at all introduced. The evidence shows many such mops as made in the past and even as made in the present, *for the defendants appear now to be selling with success a mop not claimed to infringe the complainants' invention.*"

Evidence was also received by the master against the plaintiffs' objection to the effect that from September 1st, 1875, to January 1st, 1876, the defendants had sold about 2,900 dozens of a new article of combined mop and brush holder, of which a specimen is produced marked defendants "Exhibit J," and which purported to be a patented

article, together with proof of its cost of production and selling price. (Fol. 305). All this evidence related to an unsettled and transitional state of the mop market during a short period of experiment upon it immediately following upon the period of the defendants' infringement and upon the interruption of what up to that time had been an established trade. The evidence given was all of it erroneously received and considered for the following reasons: *first*, it related to a period subsequent to the close of the defendants' infringement; *second*, the species of manufactures referred to were not in existence at the time of the infringement; *third*, these manufactures all involved devices subsequently patented.

FIFTH.

COSTS.

The court below erred in granting to the defendants costs of the reference before the master to assess damages and profits. The interlocutory decree had provided for the award of costs of the cause to the plaintiff generally. (Fols. 27, 28). Whatever the result of the assessment or its amount, or whether nominal or actual damages were allowed, the plaintiff was entitled to a full recovery of costs.

SIXTH.

So much of the final decree in this cause as is appealed from by the plaintiff should be reversed and the plaintiff should be awarded damages on 12,699½ dozens of mops manufactured and sold by the defendants at $\$1.10\frac{541}{1000}$ per dozen, in accordance with complainants' Exhibit No. 3, making $14,038.15, or at the lowest at $\$1.01\frac{92}{100}$ per dozen, in accordance with complainant's Exhibit No. 2, making $12,944.09, together with full costs of the court below and of this court.

JAMES A. ALLEN,
Of Counsel for Appellant.
Buffalo, N. Y.

SUMMARY.

1873.	Garretson's Sales. Dozens.	1874-5. Infringing Period.	Garretson's Sales. Dozens.
March 13th to 31st. . .	527	March 13th to 31st. .	372
April.	1,156	April.	868
May.	1,320	May.	360
June.	1,222	June.	154
July.	612	July.	186
August.	882	August.	91
September.	652	September.	225
October.	561	October.	166
November.	418	November.	120
December.	468	December.	151
January, 1874. . . .	450	January	66
February, "	378	February	122
		March	390
		April	475
		May 1st to 7th. . . .	96

Year.	Sales of Taylor Mop. Dozens	Sales of Garretson's Mop. Dozens.	Sales of Taylor and Garretson's Mops. Dozens.	Total Annual Supply Required by the Trade.			
1872	21407	7855½	29262½	30,000+			
1873	21132	9144	30276	"			
				Sales of Defendants' Infringing Mop. Dozens	Sales of def's new Pat'd Aug. 1875. From July 1, '75, to Jan. 1, '76, doz.	Sales of def's new Mop and Brush-holder, from Sep. 1, '75, to Jan. 1, 1876. doz.	Total Sales.
1874	19905	3731	23636	9339	Estimated	Estimated	32975
1875	16667	2765	19432	3360	5000	2900	30692

INFERIOR MOPS NOT COMPETITIVE HAVING ONLY A LOCAL AND VERY LIMITED SALE.

MANCHESTER MOP. Sold at $1.50 per dozen, or less, (fols. 215, 255.) Cost was the same as of the Taylor, (fols. 255–6). Was defective in use, cloth working loose and head coming off, (fols. 215, 216). It never interfered with maintaining prices on the Taylor and Garrison mops, (fol. 254). In 1872 and 1873, there were two thousand or three thousand dozens sold, but in 1874 and 1875, not many, (fol. 254).

SPRING MOP. Sold to peddlars. Sale very limited. Not in general market at all. Cost and sold same as the Manchester mop, (fols. 255, 216).

LEBANON MOP. Sale very limited, (fol. 254). Price and cost same as Manchester, (fol. 255).

WOODEN MOP. Sold at six to seven dollars per gross, fifty to sixty cents per dozen, (fol. 215). No appreciable profit made on them, (fol. 215). Sale so very limited not considered in the market to any extent, (fol. 255).

Other mops referred to in the evidence, which either never had a place in the market or have been long since superseded, as follows:

ALEXANDER BARNES' MOP. Mason never saw it, (fol. 268). It has not been manufactured or sold to any considerable extent since plaintiff has been acquainted with the mop market, (fol. 55).

HOMES MOP. Patented 1865; patent not expired until 1882, (fol. 157,) not known to be in the market, (fol. 268). Sold to a limited extent some years since, but not found in the market since '72 or '73. (Fol. 55).

RANDLETT MOP. Not manufactured, sold or used since plaintiff has been acquainted with the market, (fol. 55). Never seen by Mason, (fols. 268, 269).

KARR MOP. Mason never saw but one sample, (269). Castings were never used, handles sold, mop not put on market, (fol. 48).

HAVENS MOP. Pat'd; never seen in market, (fol. 269).

Defendants' I Exhibit (on original hearing) not manufactured, sold or used in the United States to any considerable extent since plaintiff has been acquainted with mop market. (Complainant's original record, fol. 55.)

Defendants' F Exhibit (on original hearing) the same as last above.

Mops named at fol. 242, including all of foregoing mops and a few others: "This list includes mops that I have seen or heard of, and there were probably samples of them in existence during the period of the accounting, but few of them on sale or in the market," (fol. 242).

Supreme Court of the United States.

OCTOBER TERM, 1883.

OLIVER S. GARRETSON,

Appellant,

against

CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, AND HENRY W. CLARK,

Appellees.

No. 201.

BRIEF FOR THE APPELLEES.

WILLIAM F. COGSWELL,

Of Counsel for Appellees.

ROCHESTER, N. Y.

Supreme Court of the United States.

OLIVER S. GARRETSON,

Appellant,

against

CHARLES B. CLARK, JOHN K. CLARK, EDWIN L. FERGUSON, AND HENRY W. CLARK,

Appellees.

October Term, 1883. No. 201.

BRIEF FOR THE APPELLEES.

HISTORY OF THE CASE.

This is an appeal by plaintiff from a decree upon a bill filed upon two patents, which adjudged plaintiff's patents valid, that the defendants were infringers, granted the usual injunction, but limited the plaintiff to nominal damages. The bill was filed May 3d, 1874. (Page 5.) The subpœna was served about May 7th, 1874. (Page 115.)

The bill was filed upon two patents, one issued to the plaintiff and Charles B. Clark, May 22, 1866, which will be found at page 31 of the record; the the other issued to the plaintiff, August 13th, 1867, which will be found at page 35 of the record. It was adjudged that the defendants infringed the first claim of the first patent and the claim of the second. (See interlocutory decree, page 13.)

The case was referred to Mr. George J. Sicard, as Master, and the hearing before him commenced December 28th, 1875. (Page 105.) On the 15th May, 1876, the Master made his report (page 14), by which he found that plaintiff had not offered evidence of damages suffered by him, or of profits realized by defendants by reason of the infringement by the defendants of the rights of the plaintiff, and therefore they were entitled to nominal damages only. Numerous exceptions to this report were filed (page 15) and the same were brought to a hearing before Judge Blatchford, at the March term, 1880, by whom the same were overruled and the decree made that the plaintiff should recover for profits and damages the sum of six cents only, his costs prior to the proceedings before the Master, and that the defendants have costs of such proceedings. (Final decree, page 18.)

There was a petition for a reargument of these exceptions (page 194), which was brought to hearing before the same Judge at a Special Term in September, 1880, and the same was denied. (Page 201.) From this final decree the plaintiff has appealed to this Court. The Master has stated the grounds of his decision in an opinion. (Page 186.) Judge Blatchford's opinion on overruling the exceptions will be found at page 189, and on the motion for a reargument, page 202.

QUESTION RAISED.

Although there are twenty-one exceptions to the report of the Master, there is but one question in the case, and that is: Whether the plaintiff gave such evidence of profits or damages lost or suffered by reason of the infringement of rhe rights secured to him by his patent as entitle him to anything more than nominal damages. This leads to the inquiry, what it is that was secured to the plaintiff.

The patent is for an improvement in the construction of mop heads, an improvement which may be described with sufficient accuracy as an improvement in the method of moving and securing in place the moveable jaw or clamp of a mophead. Mopheads with all the essential features of the plaintiff's, with the exception of this mode of clamping, have been in use for many years, and will be found illustrated by the Randlett mophead, for which a patent was issued in 1853 (page 87), the Holmes mophead, issued in 1865 (page 89), the Karr mophead patent, issued in 1865, (page 90), and the Taylor mophead, originally issued in 1859, and reissued in 1868 (page 97). By an examination of these exhibits it will appear that, as was said by Judge Hall when these patents were before him in the case of *Taylor vs. Garretson, 9 Blatchford, pp 156, 168:* "The Garretson mophead is an extremely limited but doubtless valuable improvement upon the mophead represented by the defendant's exhibit F." This was a patent for a mophead granted to one Barnes, in 1855," and the learned Judge says, at page 168, that the feature of this invention was "the introduction and use of a screw revolving without longitudinal movement around the main body of the mop handle, operated by the use of thumb ears outside the bow of the moveable jaw."

COURSE OF PLAINTIFF'S BUSINESS.

The plaintiff commenced the manufacture of his mop in the year 1868 or 1869 (page 107). Prior to 1871, there was a special competition between him and Smith, Mason & Co., the proprietors and manufacturers of the Taylor mop (page 112). On the 10th November, 1871, Smith, Mason & Co. and the plaintiff entered into an agreement (page 175) in effect pooling the result of their business and agreeing that neither should undersell the other.

PLAINTIFF'S CLAIM.

The plaintiff, upon the reference before the Master, gave evidence to show what the cost of his mopheads was and at what prices they were sold, and insisted upon his right to recover the difference or the entire profit upon the sale of the mops, as his damages. The defendant, on the contrary, early insisted that such was not the proper measure of damages and that upon such proof the plaintiff was only entitled to nominal damages. This was raised by objections to the testimony and particularly by a motion, when the plaintiff rested (bottom of page 148). The question was reserved and the defendants gave such evidence as they were advised upon the plaintiff's theory.

THE DECISION OF THE CIRCUIT COURT WAS RIGHT AND SHOULD BE AFFIRMED.

It would seem as though this question ought to be at rest in this Court, after the repeated adjudications in the cases of

Seymour vs. McCormick, 16 How., 480.
Mowry vs. Whitney, 14 Wallace, 620.
Philp vs. Nock, 17 Wallace, 460.
Blake vs. Robertson, 94 U. S., 728.
Manufacturing Co. vs Cowing, 105 U. S., 253.

The rule to be deduced from these cases cannot be better stated than it is by Judge Blatchford in his opinion in this case on the exceptions to the master's report. "The patentee must in every case give evidence tending to separate or apportion defendants profits, and the patentee's damages, between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show by equally reliable and satisfactory evidence, that the profits and damages are to be calculated on the whole machine for the reason that the entire value of the whole machine

as a marketable article, is properly and legally attributable to the patentable features."

The plaintiff complied with neither branch of this rule. It cannot be successfully contended that it was proved that the entire value of the whole mophead was properly and legally attributable to the patented feature. An inspection of the device alone, would show the contrary. The fact that another mop in the market at the same time, namely, that made by Messrs. Smith, Mason & Co., that did not possess the patentable feature, largely oversold the plaintiff's (page 134), disproves it, but it is sufficient that there is no evidence whatever tending to establish it.

Nor was there any evidence tending to separate or apportion the profits or damages between the patented feature and the unpatented features of the mop. The plaintiff did not attempt to give any such evidence. He gave evidence to show that his whole mophead would cost something less than a dollar per dozen to manufacture, and that they sold for about two dollars per dozen net.

In fact, it was not the plaintiff's patent which enabled him to make sales at a profit, but the agreement between him and the owners of the Taylor patent. Before the making of that agreement, the plaintiff and Masons sold their mopheads at whatever price they could get for the same, as low as $1 25 a dozen. (Plaintiff's testimony, page 125; Mason's testimony, page 142.) The conclusive evidence that the plaintiff's patented invention did not secure to him the monopoly of the market, is shown by the fact that his sales before the defendant commenced to manufacture, were only about one-third the sales of the Taylor mop, which did not possess the plaintiff's features. (Plaintiff's evidence, page 108; Mason's evidence, page 135) Again, it appears that after the granting of the injunction in this case, the defendants

sold a mop which it is not pretended infringed the plaintiff's patent, (of which an illustration will be found at page 184,) quite as largely as he had sold the offending mop (page 152). It appears in evidence in the case what everybody knows without, that there are a great variety of mops in the market, all alike in their substantial features, some of which are enumerated by Mr. Mason in his testimony, (page 135,) more fully on page 142, and onward, and the salability of such mops respectively depended not upon the superiority of the one over the other, but as is well said in the opinion in this case, "on the energy, diligence, business tact, superior facilities and skill, and fortuitous circumstances which contribute to their success in the market."

The claim which the plaintiff makes is not only utterly unfounded and speculative, but in conflict with all the evidence.

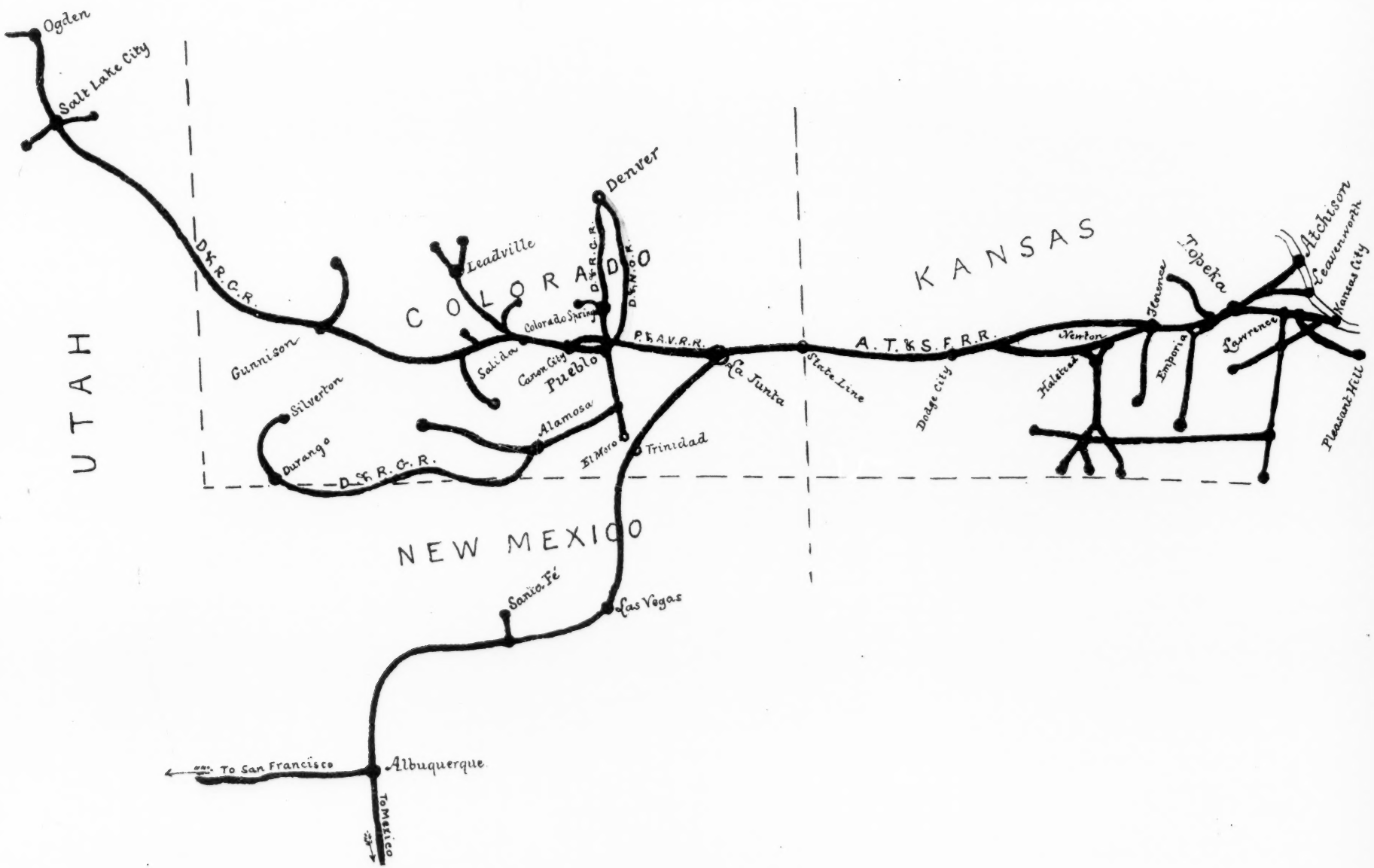
The plaintiff is much comforted by the case of the Manufacturing Co. vs. Cowing, 105 U. S., 253, but how he derives that comfort is difficult to see. That was a patent as this Court said when the case was before it, "for an improved pump," "an improvement by which it was adapted to a particular use, and there was no other way open to the public of supplying the demand for that use." It was calculated for a limited market, limited both in demand and locally, namely to the oil region of Pennsylvania and Canada, for pumping oil. For that particular use, no other pump could at the time be sold. Such was the patented article and such was its market. Under these circumstances the defendant made a pump identical with plaintiff's, and having seduced from plaintiff's employment, its agent, put its infringing article into the same market. Under those exceptional circumstances, this Court held that it was easy to see (that is, to see upon the proofs which had been given in the case), that the appellees gain in their business must neces-

sarily have been the appellant's loss, and consequently the appellant's damages were to be measured by the appellees' profits derived from the business in that special and limited market. How the rule of that case can be applied to such a common article as a mop which finds a market at every cross-roads in the country, which is in use wherever there is a floor to be cleaned, and in favor of a mop which differs from other mops only in the method by which the clamp or jaw is moved and secured, I leave to the appellant's counsel to show.

The allowance or refusal of costs is a matter of discretion and not reviewable. If it were, it is obvious that it is rightly disposed of.

The decree should be affirmed.

WILLIAM F. COGSWELL,
of Counsel for Appellees,
Rochester, N. Y.


Ogden
Salt Lake City
D.R.G.R.
Gunnison
Silverton
Durango
D.R.G.R.
UTAH
COLORADO
Leadville
Salida
Colorado Spring
Canon City
Pueblo
Alamosa
El Moro
Trinidad
Denver
D.R.G.R.
D.&N.O.R.
P.&A.V.R.R.
La Junta
State Line
NEW MEXICO
Santa Fé
Las Vegas
To San Francisco
Albuquerque
To Mexico
KANSAS
A.T.&S.F.R.R.
Dodge City
Hutchinson
Emporia
Topeka
Florence
Atchison
Leavenworth
Kansas City
Lawrence
Pleasant Hill

A.D. 1845 Nov. 4. N° 10,922
CARSON'S SPECIFICATION

8 SHEETS.

No. 250
McMurray et al
v. page 394
Mallory et al

FIG. 2.

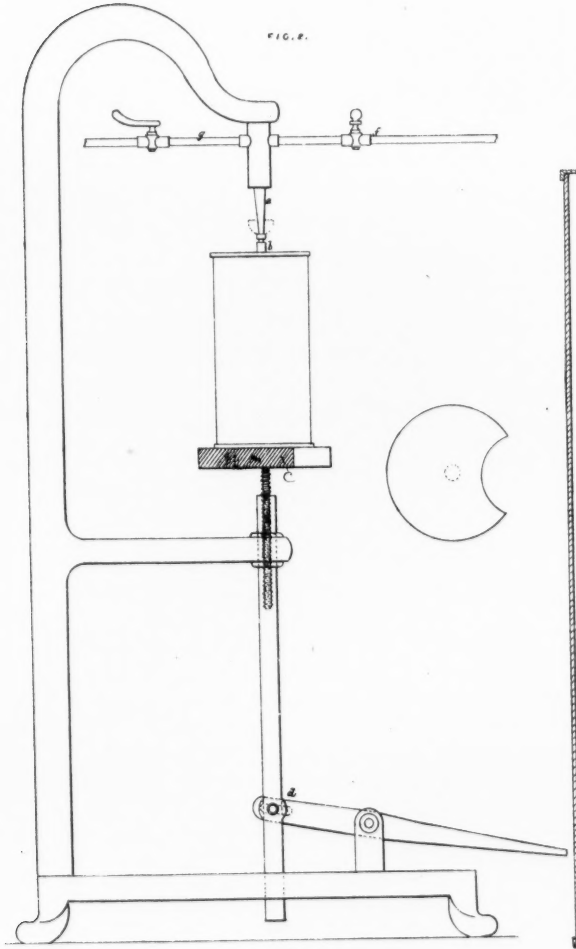


FIG. 1

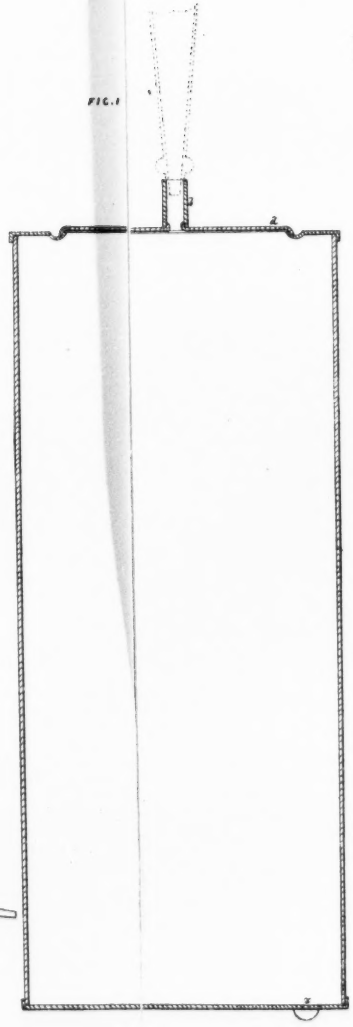


FIG. 5.

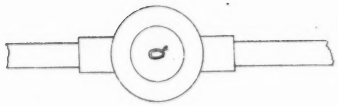


FIG. 4.

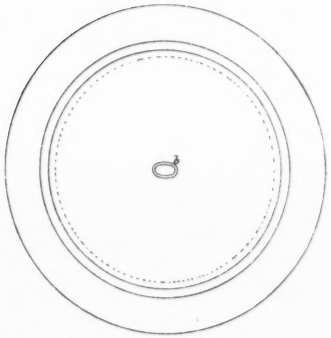
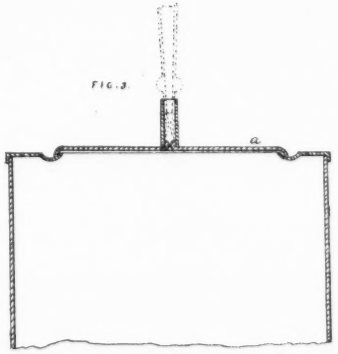


FIG. 3.



J. A. BOSTWICK.

Assignor to E. M. LANG & Co.

Soldering Iron.

No. 8,466. Reissued Oct. 29, 1878.

Figure 2.

Figure 1.

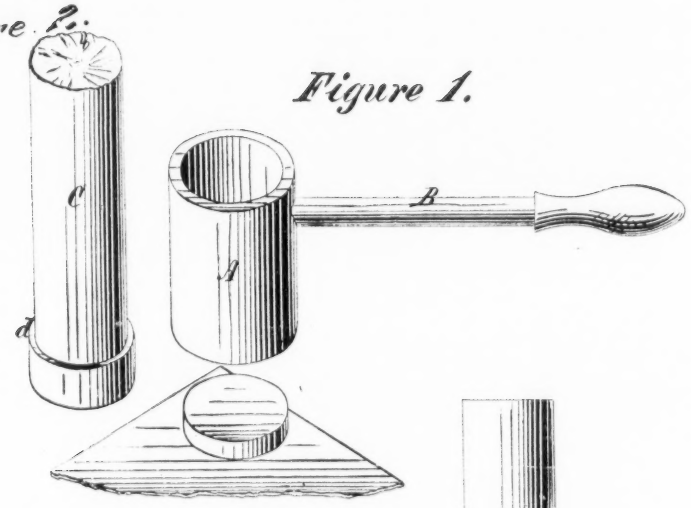
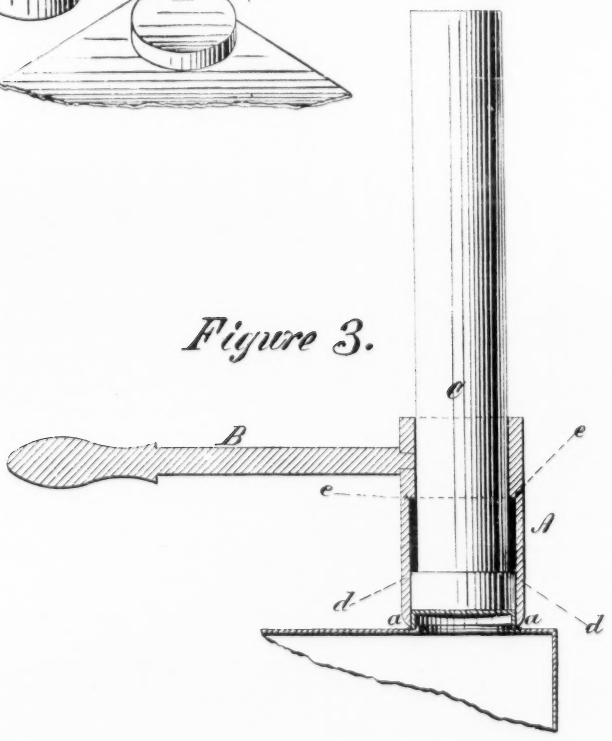


Figure 3.



Witnesses:

George W. Miatt

James E. Kearney

Inventor:

J. A. Bostwick

By David A. Burr

Atty.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

Clark & Garretson,

Mon Head.

No. 54,860. Patented May 22, 1866.

No. 201
Garretson
v.
Clark et al
page 65.

Fig. 2.

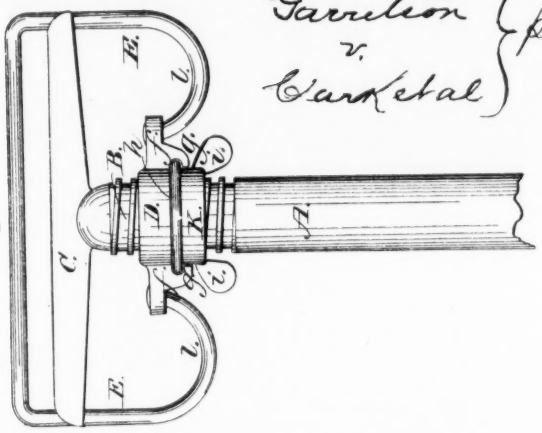
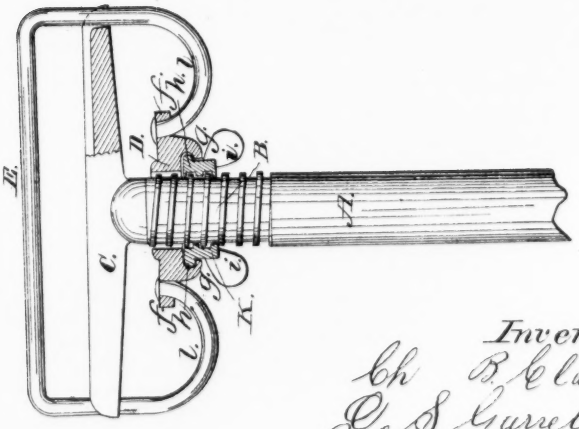


Fig. 1.



Witnesses:
James Calkins
Jay Hyatt

Inventor
Ch B Clark
C S Garretson
By their attorneys
J. Fraser & Co

O. S. Garretson,

Mop Head.

No. 67,643. Patented Aug. 13, 1867.

No. 201
Garretson
v.
Clark et al
} Page 72

Fig: 1.

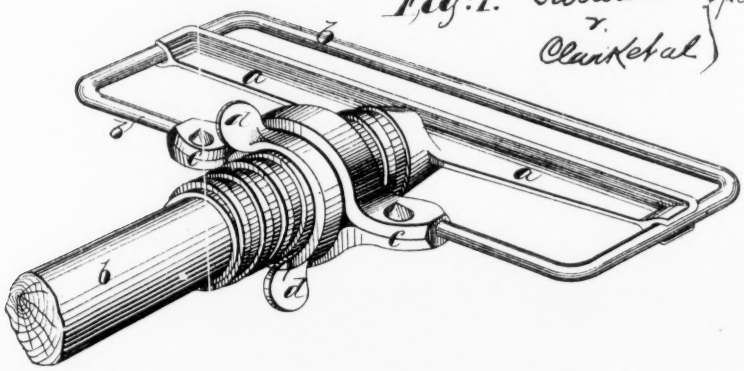


Fig: 2.

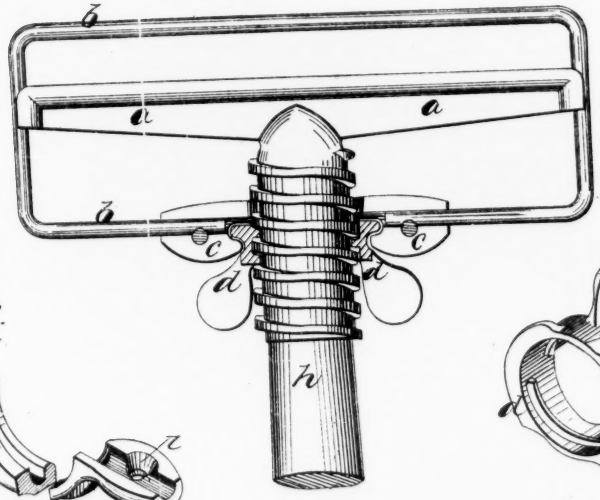
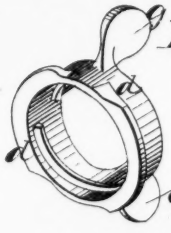


Fig: 3.

Fig: 4.



Witnesses:
S. G. Burnt
J. G. Garretson

Inventor:
O S Garretson

S. Merrick.

Screw Wrench.

No. 5,707. Patented Aug 15, 1848.

No. 201
Garretson
v.
Clark et al
} page 120.

Fig: 1

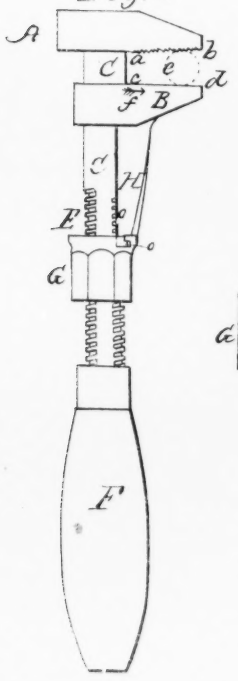


Fig: 3

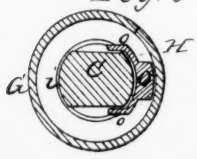


Fig: 4

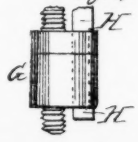


Fig: 5

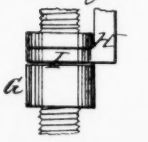
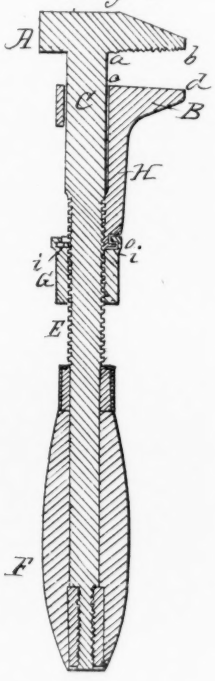


Fig: 2



No. 201
Garretson
v.
Clark et al

page 126.

A. D. Briggs,

Wrench.

No. 23,751. Patented Apr. 26, 1859.

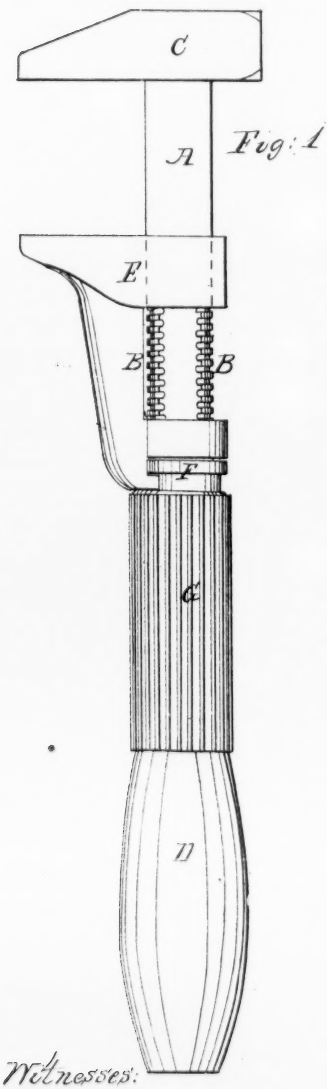


Fig: 1

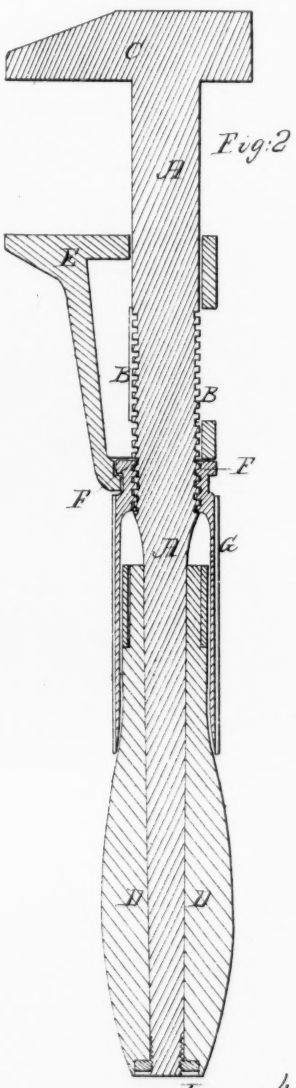


Fig: 2

Witnesses:
T. J. Hawkins
A. L. Soule

Inventor:
A. D. Briggs

A. W. Park,

Hammer.

No. 48,027. Patented May 30, 1865.

No. 201
Garretson
v.
Clark et al
} page 133

Fig: 1

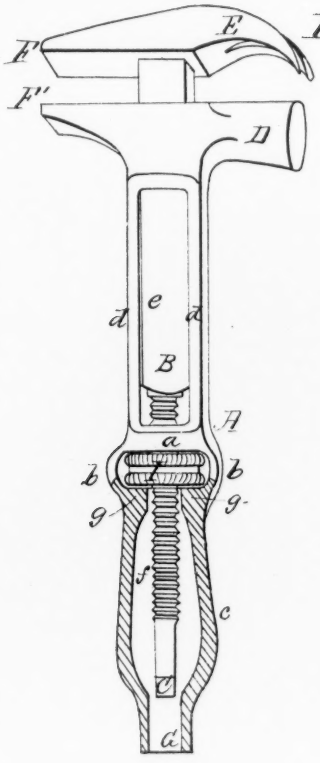


Fig: 2

Witnesses:
Thos Tuson
W. Treurin

Inventor:
A.W. Park
per Munn & Co
Attorneys

B. Boardman.

Combination Tool.

No. 56,166. Patented July 10, 1866.

No. 201
Garretson
Clark et al
page 139.

Fig: 1

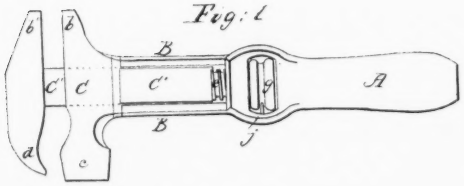


Fig: 4

Fig: 5

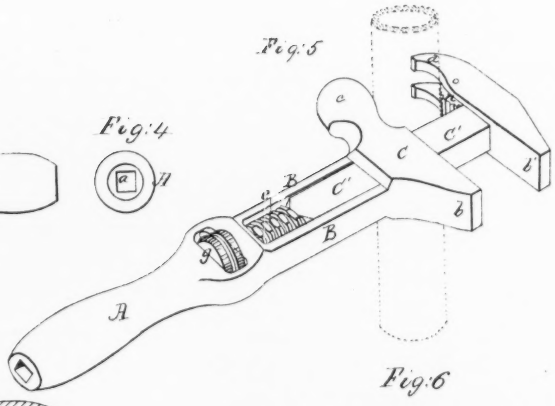
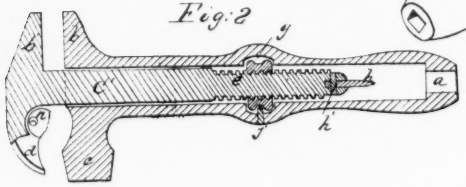


Fig: 2



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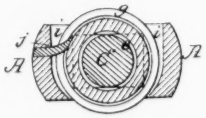


Fig: 3

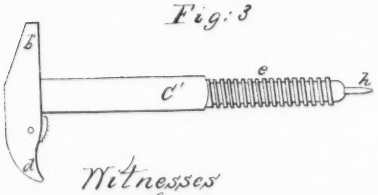


Fig: 7

Fig: 8

Witnesses
R. F. Campbell
Edw. Schafer

Inventor:
Byron Boardman
by his Attys
Mason, Fenwick

R. H. Gray.

Lifting and Pressing Screw.

No. 58,342. Patented Sep. 25, 1866.

No. 201
Garrison
v.
Clark et al

Page 146.

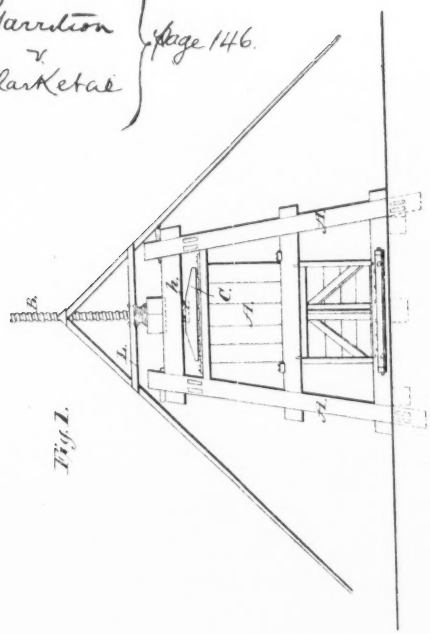
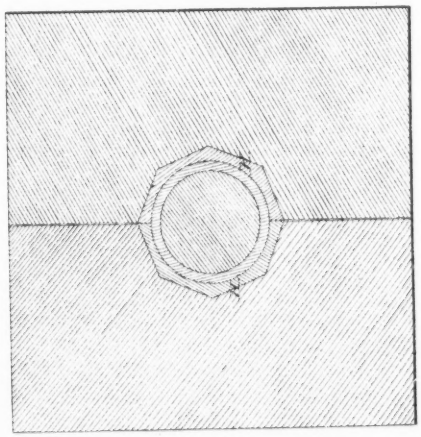


Fig. 1.



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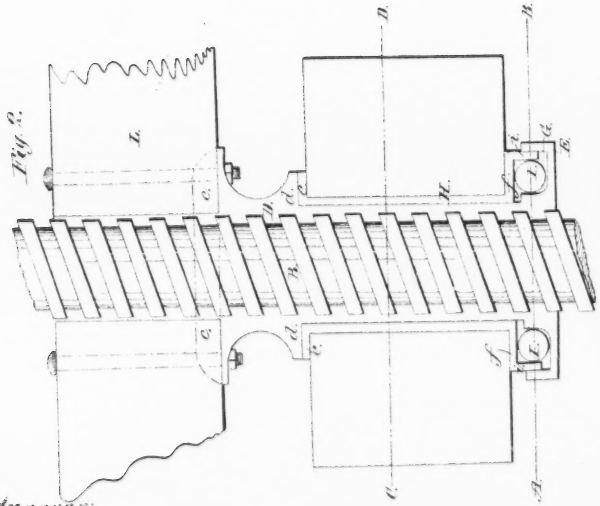

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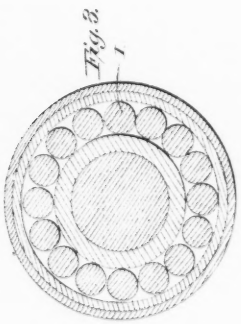


Fig. 3.

Witnesses:
H. C. Clayton
George F. Ellis.

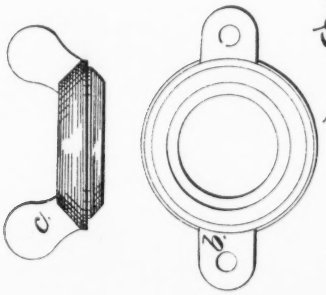
Inventor:
Richard H. Gray

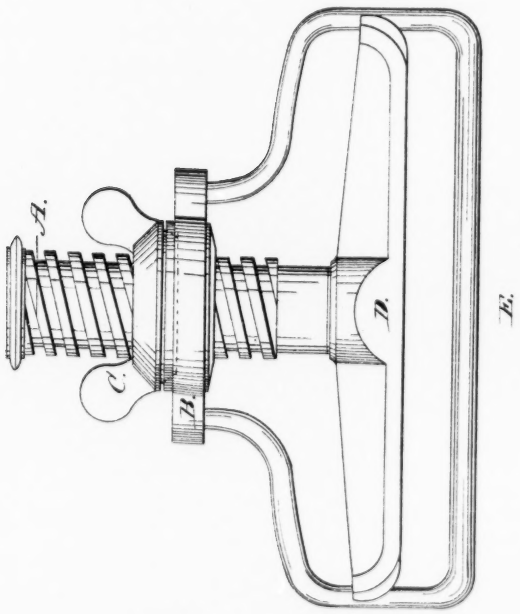
C. Karr,

Mop Head.

No. 50,137. Patented Sep. 26, 1865.

No. 201
Gurnsey
v.
Clark et al
page 165.





Witnesses:
Jay Hyatt
L. Fuller

Inventor
Corydon Karr
by his attorneys
J. Fraser & Co

T. Randlett.

Mop Head.

No. 10,237. Patented Nov. 15, 1853.

No. 201
Garretson
v.
Clark et al
Page 153

Fig 3.

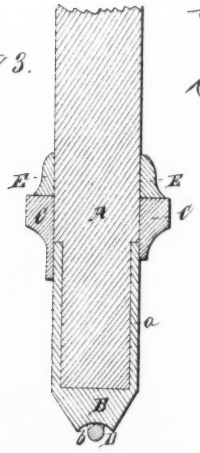
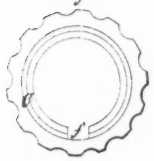


Fig 4.



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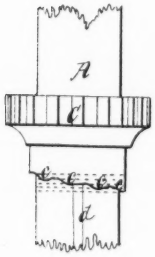

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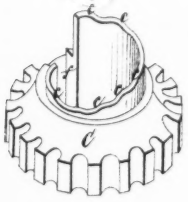
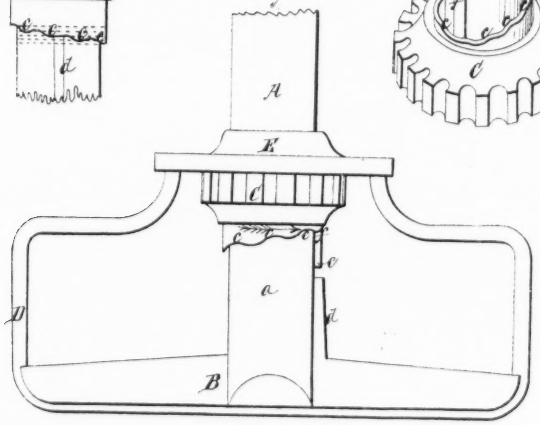


Fig 1.



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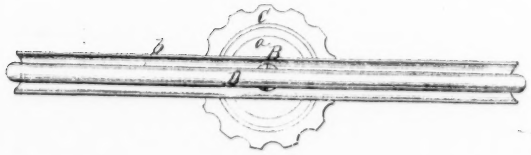


N. Homes,

Mop Head.

No. 47,642. Patented May 9, 1865.

No. 201
Garretson
v.
Clark et al
} page 160.

Fig. 2

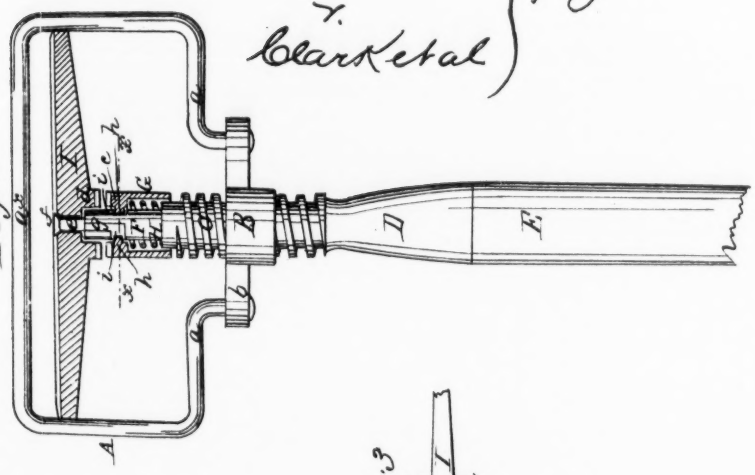
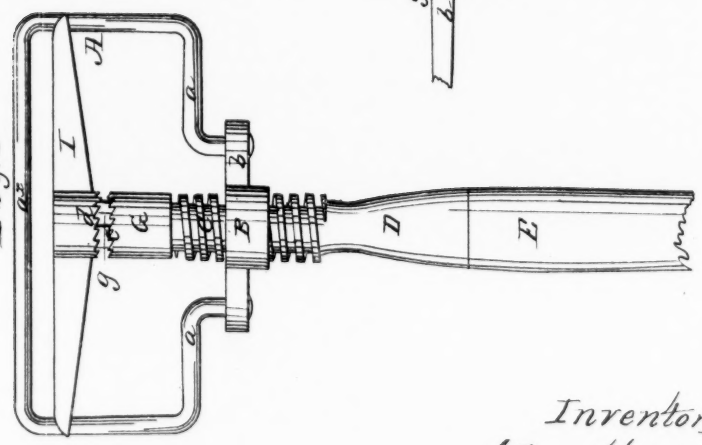


Fig. 3

Fig. 1



Witnesses
Theo Fusel
Wm. Drewry

Inventor:
Nelson Homes
per Munn & Co
attys

A.D. 1852, OCTOBER 1. N° 45.
RICKARD'S SPECIFICATION.

No. 201
Sarrelon
v.
Clark & etal
} page 193.

Fig 2.

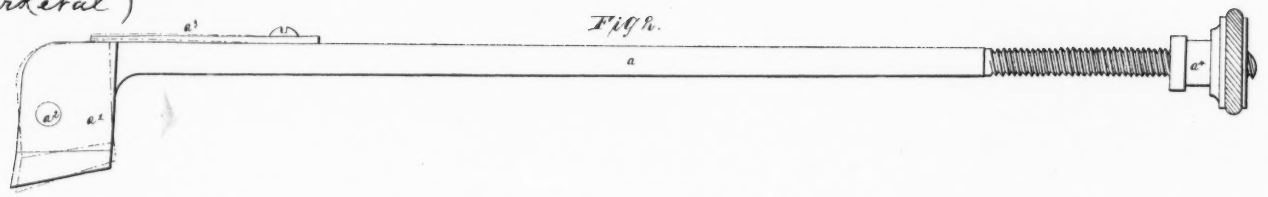
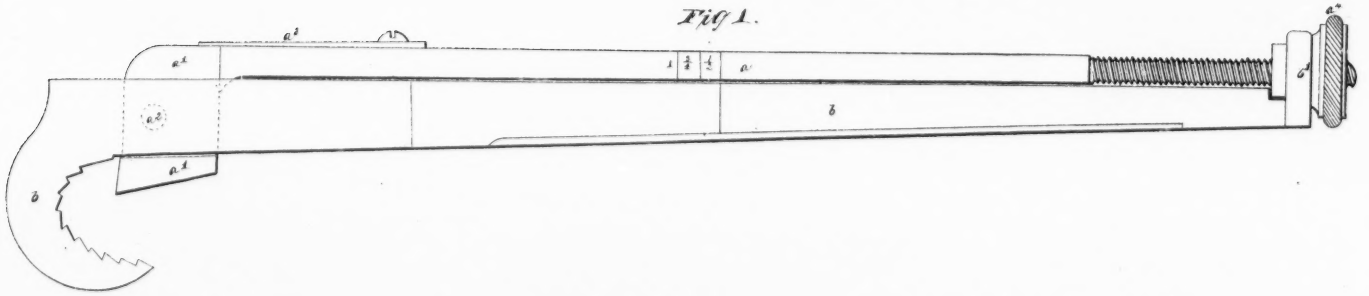


Fig 1.



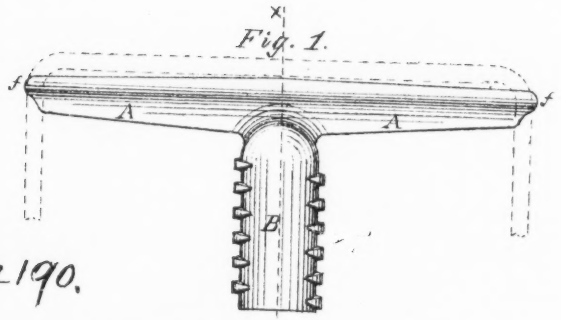
C. B. CLARK.

Mop-Heads.

No. 145,397. Patented Dec. 9, 1873.

No. 201
Garretson
v.
Clark et al
page 190.

Fig. 1.



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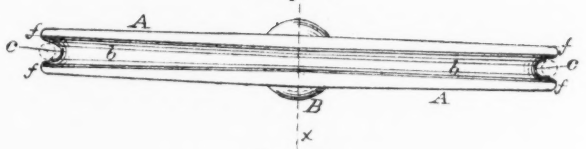

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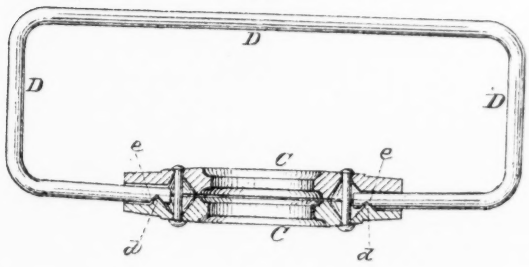


Fig. 4.

Witnesses:

Charles M Higgins

Arthur C. Fraser.

Inventor:

Charles B. Clark

Per Burke & Fraser, attys

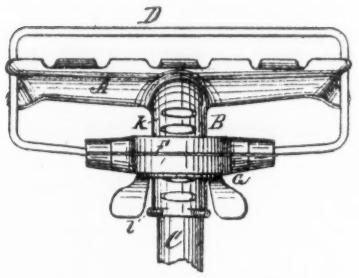
C. B. CLARK.

Improvement in Mop-Heads.

No. 128,711. Patented July 9. 1872.

No. 201
Garretson
v.
Clark et al
page 187.

Fig. 1.



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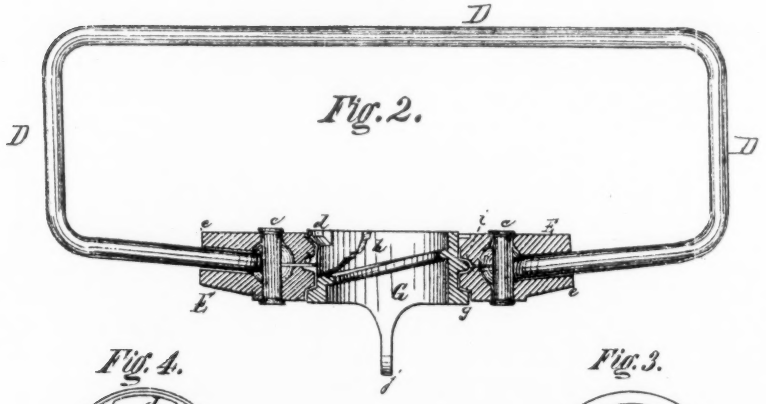

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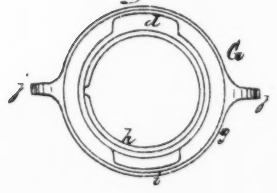

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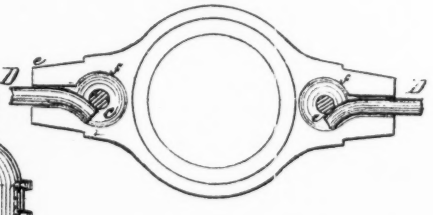

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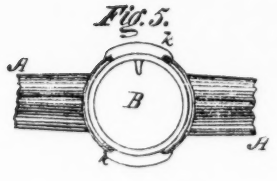

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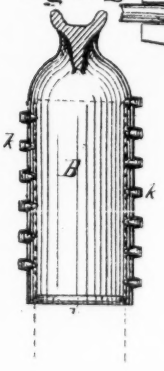


Witnesses:

K. N. Jones

Wm. F. McNamara

Inventor:

Charles B. Clark

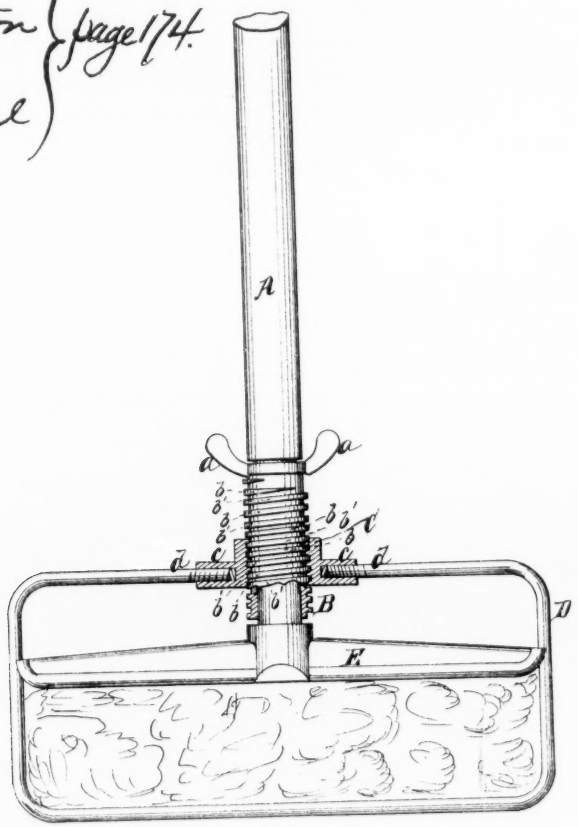
Per Burke & Fraser, attys

J. Messenger,

Mop Head.

No. 64,683. Patented May 14, 1867.

No. 201
Garretson
v.
Clark et al
page 174.



Witnesses.
Thos Tyssche
J. A. Service.

Inventor.
Jos Messenger
H. H. Mason
Per Munn & Co
Attorneys

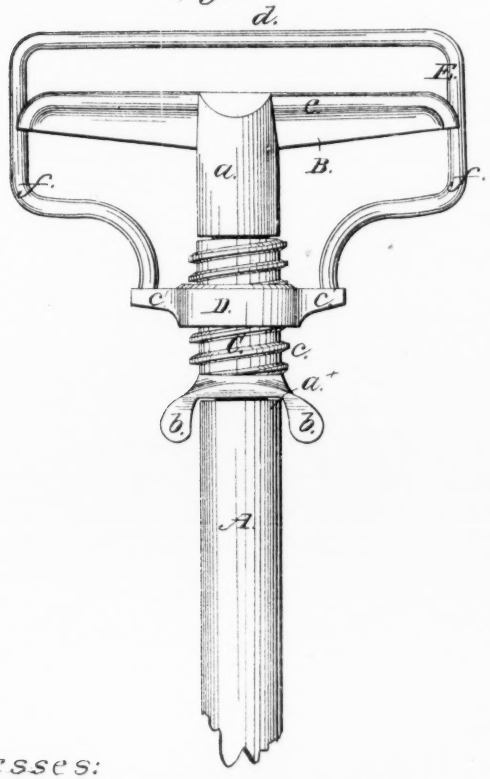
L. Taylor.

Mop Head.

No. 3,682. Reissued Oct. 19, 1869.

No. 201
Garretson
v.
Clark et al
} page 182.

Fig. 1.



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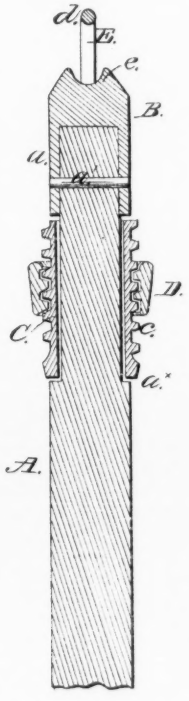


Witnesses:

Sam' W. Porter
David A. Smith

Inventor:

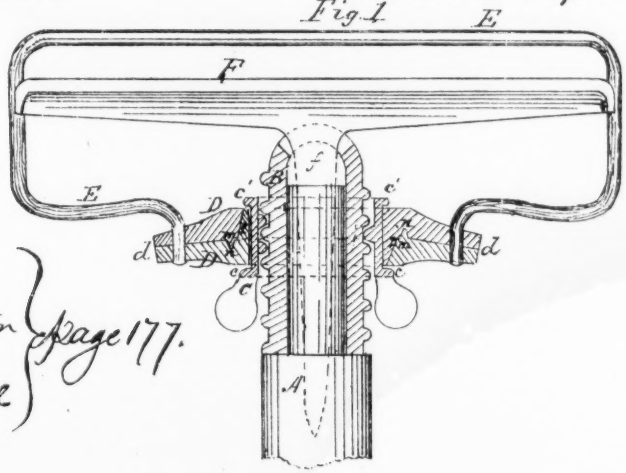
Luke Taylor

Clark & Ferguson.

Mop-Head.

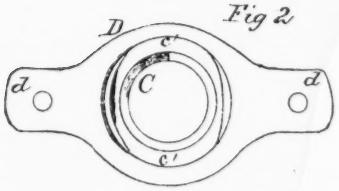
No. 82383 Patented Sept. 22, 1868

Fig. 1



No. 201
Garretson
v.
Clark et al
} Page 177.

Fig 2



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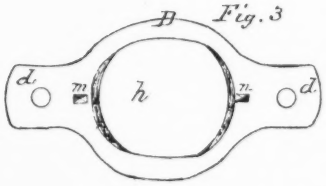

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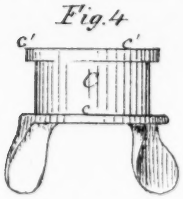

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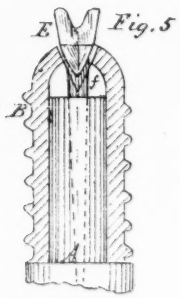


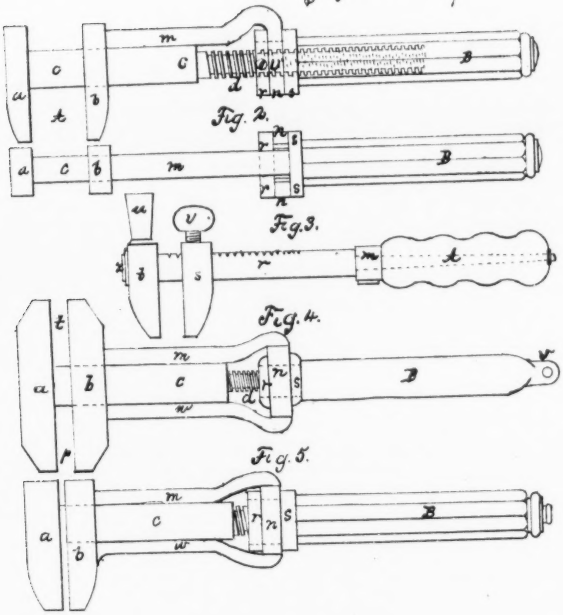
Witnesses
W. J. Chamberlain
Victor H. Becker

Inventors
Chas B. Clark.
E. L. Ferguson
by Dickerson & Byrnes
Attys

Office Ex. Richd I. R.E. I. Ex 1.

Technolog. Encycl. Bd. XIV.

Fig. 1. of plate 327



No. 201 Garretson v. Clark et al } page 199.

Fig. 8

Fig. 7. of plate 328

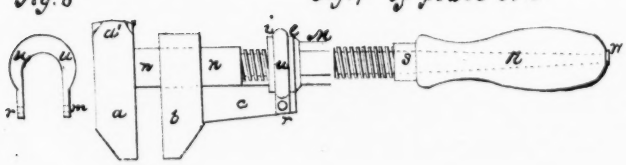


Fig. 1.

Fig. 2.

Fig. 3. of plate 187